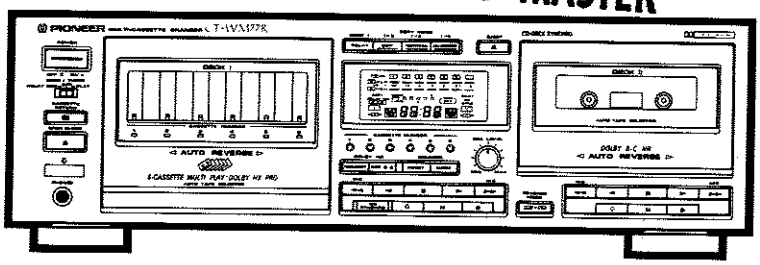
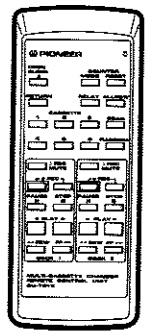
Operating Instructions

MULTI-CASSETTE CHANGER

CT-WM77R

SPARE PARTS MASTER





Thank you for buying this PIONEER product.
Please read through these operating instructions so you will know how to operate your unit properly. After you have finished reading these instructions, keep the manual in a safe place for future reference.
In some countries or regions, the shape of the power plug and power outlet may sometimes differ from that shown in the explanatory drawings. However, the method of connecting and operating the unit is the same.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

IMPORTANT NOTICE
[For U.S. and Canadian models]

The serial number for this equipment is located on the rear panel. Please write your serial number on your enclosed warranty card and keep it in a secure area. This is for your security.

[For Canadian model]

CAUTION: TO PREVENT ELECTRIC SHOCK DO NOT USE THIS (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

ATTENTION: POUR PREVENIR LES CHOCS ELECTRIQUES NE PAS UTILISER CETTE FICHE POLARISEE AVEC UN PROLONGATEUR, UNE PRISE DE COURANT OU UNE AUTRE SORTIE DE COURANT, SAUF SI LES LAMES PEUVENT ETRE INSEREES A FOND SANS EN LAISSER AUCUNE PARTIE A DECOUVERT.

"This product complies with the Radio Interference requirements of the EC (European Community) Directive 87/308/EEC."

LINE VOLTAGE SELECTOR SWITCH

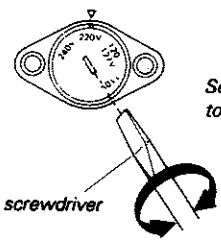
Only multi-voltage models are provided with this switch.

U.S., Canadian, European, U.K., and Australian models are not provided with this switch.

Mains voltages in Saudi Arabia are 127V and 220V only. Never use this model with 110V setting in Saudi Arabia.

The line voltage selector switch is on the rear panel. Before your model is shipped from the factory, this switch is set to the power requirements of the destination. Check that it is set properly before plugging the power cord into the AC wall socket. If the voltage is not properly set or if you move to an area where the voltage requirements differ, adjust the selector switch as follows.

1. Disconnect the power cord.
2. Use a medium-size screwdriver.
3. Insert the screwdriver into the groove on the voltage selector, and adjust so that the tip of the arrow points to the voltage value of your area.



Set the voltage selector to the voltage in your area.

Medium-size screwdriver

PIONEER®

The Art of Entertainment

IMPORTANT 1

The lightning flash with arrowhead, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

CAUTION:
TO PREVENT THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

IMPORTANT 2

If the apparatus is fitted with AC mains power outlet(s), see REAR PANEL FACILITIES for convenient connection of additional Hi-Fi component(s). Make all connections to the AC outlet(s) and the signal terminals first. Connect the plug to the wall socket last (make sure that the power switch is off.)

FOR USE IN THE UNITED KINGDOM

The wires in this mains lead are coloured in accordance with the following code:

Blue: Neutral
Brown: Live

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured marking identifying the terminals in your plug proceed as follows:

The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.
The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.
Do not connect either wire to the earth terminal of a three pin plug.
Equipment sold in the U.K. is not supplied with a power plug.

SAFETY INSTRUCTIONS

READ INSTRUCTIONS — All the safety and operating instructions should be read before the appliance is operated.

RETAIN INSTRUCTIONS — The operating instructions should be retained for future reference.

HEED WARNING — All warnings on the appliance and in the operating instructions should be adhered to.

FOLLOW INSTRUCTIONS — All operating and use instructions should be followed.

WATER AND MOISTURE — The appliance should not be used near water — for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.

LOCATION — The appliance should be installed in a stable location.

WALL OR CEILING MOUNTING — The appliance should not be mounted to a wall or ceiling.

VENTILATION — The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or, placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.

HEAT — The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.

POWER SOURCES — The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.

POWER-CORD PROTECTION — Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them. Pay particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.

POLARIZATION — If your purchased product is provided with a polarized power plug, please read the following instructions. This product is equipped with a polarized alternating current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.

CLEANING — The appliance should be cleaned only with a polishing cloth or a soft dry cloth. Never clean with furniture wax, benzine, insecticides or other volatile liquids since they may corrode the cabinet.

POWER LINES — An outdoor antenna should be located away from power lines.

NONUSE PERIODS — The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.

OBJECT AND LIQUID ENTRY — Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

DAMAGE REQUIRING SERVICE — The appliance should be serviced by a Pioneer authorized service center or qualified service personnel when:

- The power-supply cord or the plug has been damaged.
- Objects have fallen, or liquid has been spilled into the appliance.
- The appliance has been exposed to rain.
- The appliance does not appear to operate normally or exhibits a marked change in performance.
- The appliance has been dropped or the enclosure damaged.

SERVICING — The user should not attempt to service the appliance beyond that described in the operating instructions. For all other servicing, contact the nearest Pioneer authorized service center.

OUTDOOR ANTENNA GROUNDING — If an outside antenna is connected to the antenna terminal, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges.
In the U.S.A. section 810 of the National Electrical Code, ANSI/NFPA No. 70-1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Fig. A.

CART — An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

NEC — NATIONAL ELECTRIC CODE

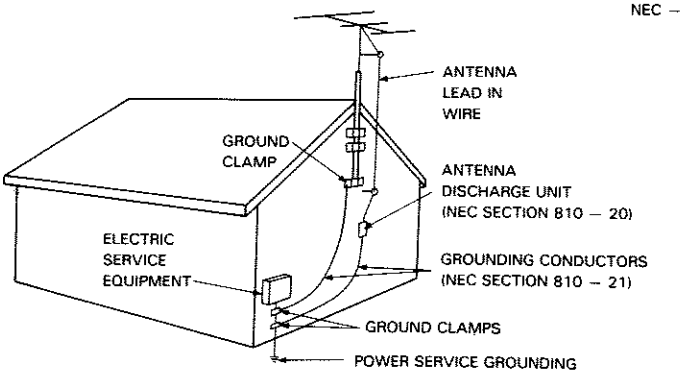


FIG. A

INFORMATION TO USER [FOR U.S. MODEL]

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- reorient the receiving antenna
- relocate this equipment with respect to the receiver
- move this equipment away from the receiver
- plug this equipment into a different outlet so that equipment and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful:
"How to Identify and Resolve Radio-TV Interference Problems".
This booklet is available from the US Government Printing Office, Washington, D.C., 20402, Stock No. 004-000-00345-4.

The above instructions apply only to units which will be operated in the United States.

[For Canadian model]

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

[Pour le modèle Canadien]

L'interférence, radioélectrique générée par cet appareil numérique de type B ne dépasse pas les limites énoncées dans le Règlement sur les perturbations radioélectriques, section appareil numérique, du Ministère des Communications.

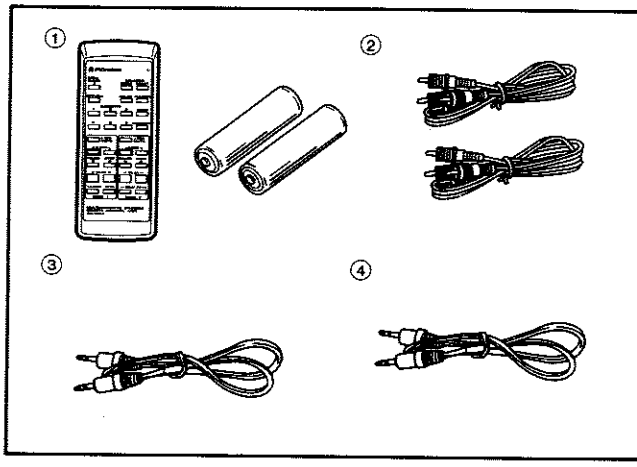
POWER-CORD CAUTION

Handle the power cord by the plug. Do not pull out the plug by tugging the cord and never touch the power cord when your hands are wet as this could cause a short circuit or electric shock. Do not place the unit, a piece of furniture, etc., on the power cord, or pinch the cord. Never make a knot in the cord or tie it with other cords. The power cords should be routed such that they are not likely to be stepped on. A damaged power cord can cause fire or give you an electrical shock. Check the power cord once in a while. When you find it damaged, ask your nearest PIONEER authorized service center or your dealer for a replacement.

CONTENTS

INSTALLATION 5
HANDLING CASSETTE TAPES 6
CONNECTIONS 7
FRONT PANEL FACILITIES 8
REMOTE CONTROL UNIT 11
INDICATORS 12
RECORDING 14
ADDITIONAL RECORDING OPERATIONS 16
PLAYBACK 17
MUSIC SEARCH 19
TAPE COPYING 21
CD-DECK SYNCHRO RECORDING 24
RECORDING USING AN AUDIO TIMER 26
PLAYBACK USING AN AUDIO TIMER 27
MAINTENANCE 28
TROUBLESHOOTING 29
SPECIFICATIONS 31

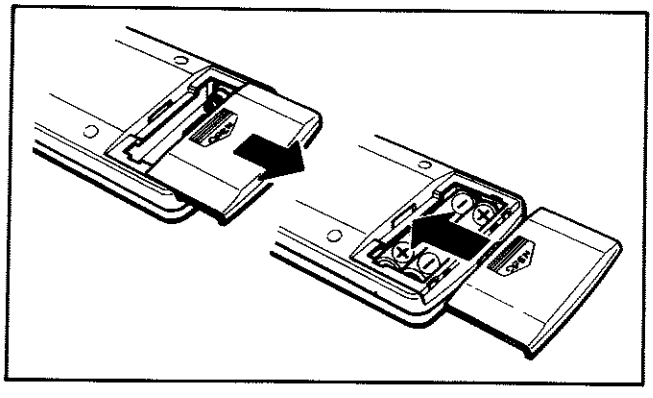
PACKING LIST



Make sure that the following are included with your cassette deck:

① 1 Remote control unit and 2 Dry cell batteries (AAA, [IEC R03 (UM-4)])
② Connection cord with pin plugs (2)
③ CD-DECK SYNCHRO control cord (1)
④ System remote control cord (1)
⑤ Cassette labels (1)

INSERTING THE BATTERIES INTO THE REMOTE CONTROL UNIT



(1) Remove the cover of the battery compartment on the reverse side of the remote control unit. This can easily be done by pressing down on the cover with your thumb and pulling it in the direction of the arrow.
(2) Load 2 "AAA"-size [IEC R03 (UM-4)] dry cell batteries into the battery compartment, following the "+" and "—" markings on the inside of the compartment.
(3) Replace the cover of the battery compartment.

Handling the batteries:

- Do not mix new and used batteries or different types of batteries.
- Batteries will last about 6 months with normal use. Always remove the batteries if you do not intend to use the remote control unit for an extended period of time.
- In the event of leakage, wipe the inside of the case thoroughly before loading new batteries.

INSTALLATION

LOCATION

When installing the cassette deck, avoid locations with high temperatures or humidity, and make sure that the location is well ventilated.

- Do not install the cassette deck in locations subject to direct sunlight, or near a space heater or other heating device, as this may cause damage to the finish or the internal parts.
- Malfunctions may also result if the cassette deck is installed in an excessively humid or dusty location. Do not install the cassette deck next to kitchen counters or other locations subject to oily smoke or humidity.

INSTALLATION PRECAUTIONS

- If the cassette deck is placed directly on top of an amplifier, it may pick up humming or other noises. Also, if the amplifier generates a large amount of heat, the cassette deck may malfunction.
- Place the cassette deck on a flat, level surface.
- If the cassette deck is located near a television set, it may pick up interference noise, which will be recorded as a whistling sound on the tape. If this happens, move the cassette deck further away from the television set or turn the television set off when operating the cassette deck.

NOTE:

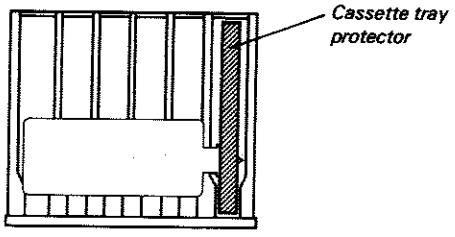
When installing the cassette deck, do not place a cloth over the top or block the ventilation openings in any way.

CONDENSATION

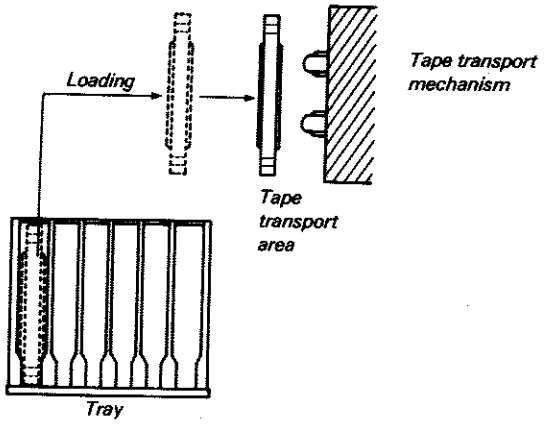
When the cassette deck is moved from a cold location to a warm location, or when the temperature of the room changes suddenly, condensation may form on the mechanical parts and affect the performance of the tape. If this occurs, wait for about one hour to allow the cassette deck to adjust to the room temperature.

BEFORE USING THE CASSETTE DECK

The cassette tray protector protects the cassette deck from shocks and damage during transportation. Remove it before using the cassette deck, and keep it in a safe place. When transporting the cassette deck, remove all tapes from the cassette tray, and replace the cassette tray protector in slot 6, as shown below.



Loading: Loading refers to the physical movement of the tape from one of the six tray slots to the tape transport area, as shown in the diagram below.



AUTO REVERSE MECHANISM

This cassette deck uses the same rotary recording/playback head for both the forward and reverse directions.
When the tape reaches the end, the auto reverse function reverses the tape transport direction. The sound will be interrupted while the auto reverse function is operating, and while the leader tape section is passing the heads in each direction.

HANDLING CASSETTE TAPES

CHECK CASSETTE BEFORE USE

Check the following items before placing a cassette tape in the cassette deck:

Is the tape loose, or is some of the tape outside the cassette?
If some of the tape is loose or projecting outside the cassette shell, the tape may not properly enter between the capstan and pinch roller. This will prevent the tape from being supplied properly, and may even damage the tape itself. In such cases, insert a pencil into the reel hole and take up the slack (Fig. A). Some cassette tapes come with a plastic or thick paper stopper to prevent the tape from becoming slack. Remove this stopper before inserting the tape and replace it after use.

Are the accidental erasure prevention tabs intact?
These tabs allow you to prevent important recordings from being erased accidentally. When the tab on the cassette shell is removed (Fig. B), it is not possible to activate the recording function, even by pressing the recording button, so valuable recordings will not be erased by mistake. To re-record on a cassette whose tab has been removed, simply stick a piece of doubled adhesive tape over the hole (Fig.C).
When using metal or chrome (CrO_2) tapes, be careful not to block the detection holes with the tape (Fig. D, E, F). If the holes are blocked, the automatic tape selector mechanism will not operate correctly.

NOTES:

- *The accidental erasure prevention tab for each side is the one located on the top left when the side that you want to protect is facing you.*
- *When removing the tab, do not use a magnetized screwdriver.*

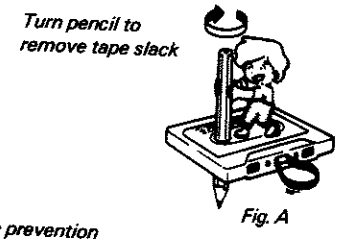


Fig. A

For erasure prevention remove . . .

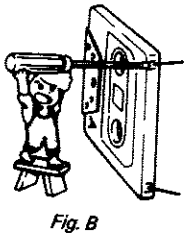


Fig. B

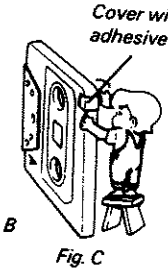


Fig. C

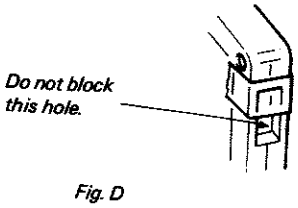
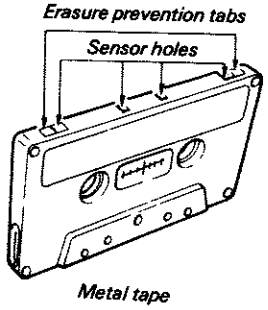


Fig. D

AUTOMATIC TAPE SELECTOR FUNCTION

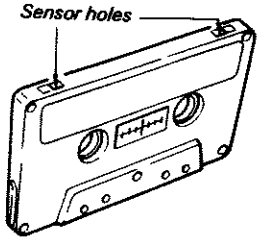
This cassette deck is equipped with an automatic tape selec function which utilizes the sensor holes on the tape cassette determine the type of tape being used. The cassette deck is th set to match the tape recording bias and equalization.

- When using metal tapes, make sure the tapes have sens holes.
- Do not use FeCr tapes with this cassette deck.



Metal tape

Fig. E



CrO_2 (Chrome) tape

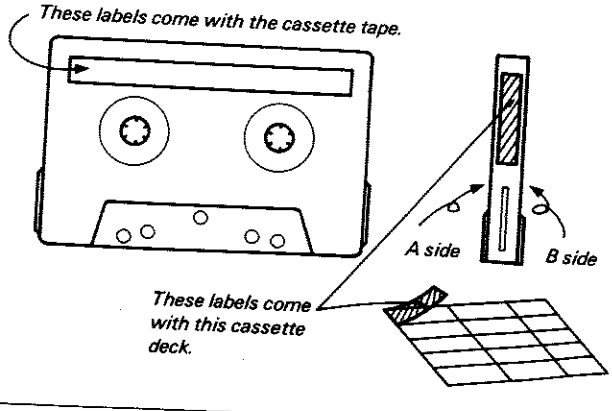
Fig. F

TIPS ON USING CASSETTE TAPES

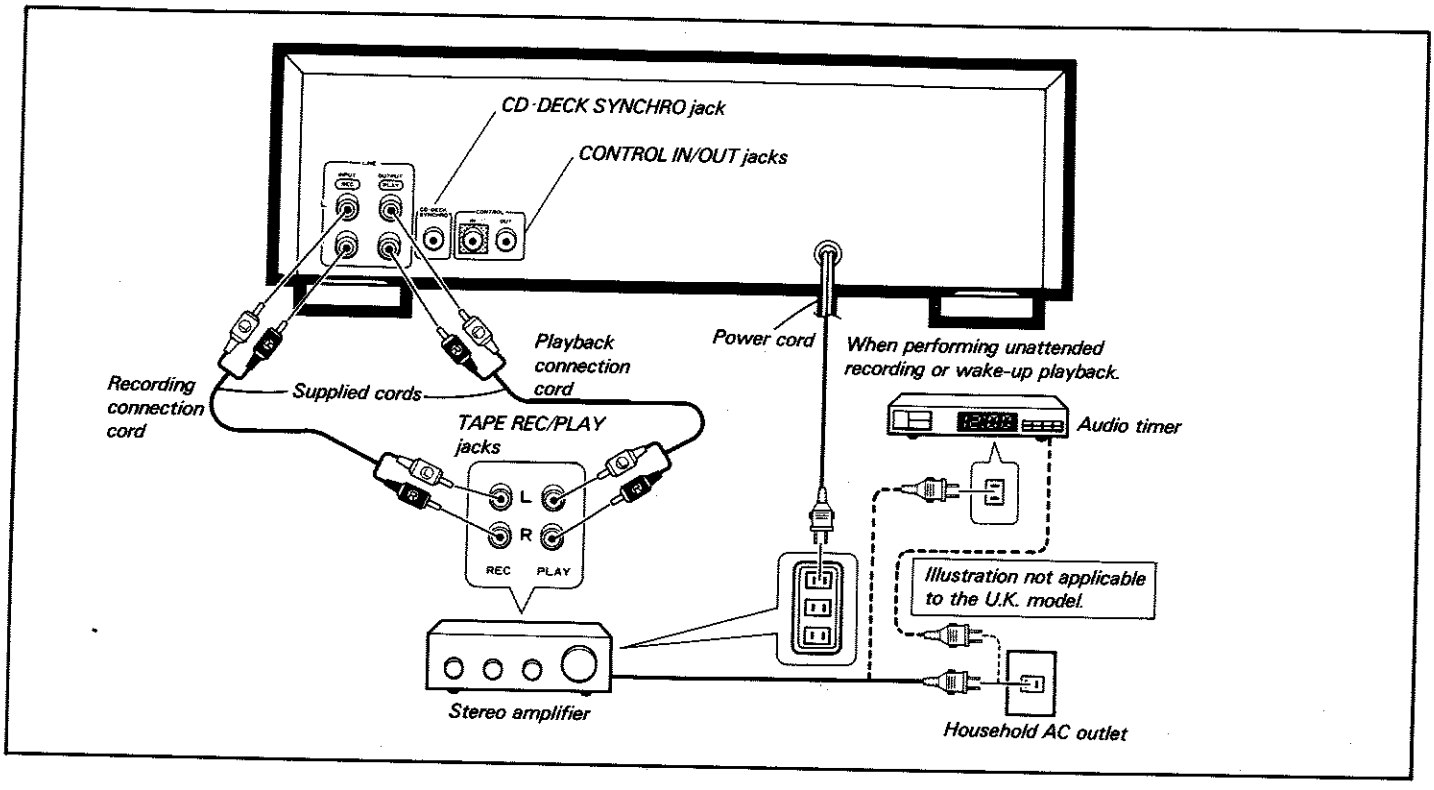
- If cassette tapes are irregularly wound, the tape may get jammed in the rollers, causing damage to the tape or even the deck itself. If you are not sure whether or not the tape is wound evenly, fast-forward or fast reverse the tape from beginning to end.
- Leader tape (which cannot be recorded on) is provided at the beginning of a cassette tape. Start recording after allowing the tape to run for about 5 seconds so that the leader tape clears the recording head.
- Do not leave a cassette tape exposed to the environment. Store the cassette in its case so that dust and dirt do not adhere to the tape, and so that the tape does not become slack. Store tapes in a location free from magnetism, dust, dirt and oil.
- Because C-120 tapes are so thin, they can easily jam in the pinch roller and capstan, and they are susceptible to other trouble such as irregular winding. Try not to use them with this unit.

This cassette deck contains a precision loading mechanism to load tapes from the cassette tray. Observe the following precautions to avoid damaging this mechanism:

- Do not use old cassettes with loose labels or cassettes with overlapping labels.
- Attach cassette labels carefully and securely.
- If the label is peeling off, remove it completely, and replace it with a new label.



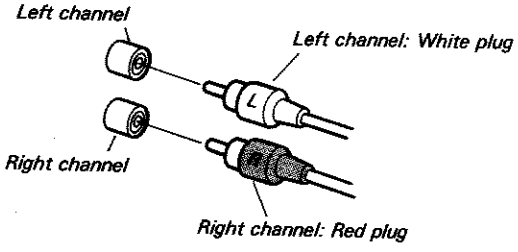
CONNECTIONS



- Read through the operating instructions of the stereo components which you intend to connect to this cassette deck.
- Turn the power on only after making all the connections.
- Make sure that the plugs are inserted securely. Improper connections may generate noise.

Connecting the input/output cords

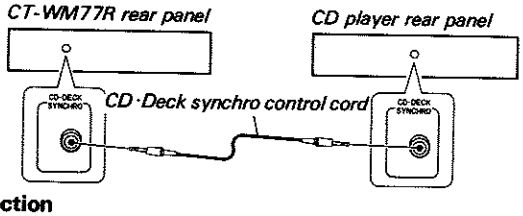
Connect the plugs properly.



CD·DECK SYNCHRO jack

If this cassette deck is used together with a PIONEER CD player equipped with the synchro recording function, synchro recording from the CD player can be carried out at the touch of a button (see pages 24 and 25).

Use the enclosed CD·Deck synchro control cord to connect the CD·DECK SYNCHRO jack on this cassette deck to the CD·DECK SYNCHRO jack on the CD player.



Connection

Connect the CD·DECK SYNCHRO jack of this cassette deck to the CD·DECK SYNCHRO jack of the CD player using the enclosed CD·Deck synchro control cord.

NOTES:

- *Keep the input and output jacks connected between the amplifier and this cassette deck. Otherwise, CD·Deck synchro recording cannot be carried out.*
- *Even when the CD player is connected to the amplifier with an optical fiber cable, connect the CD player to the amplifier or to this cassette deck with pin plug connection cords.*

PIONEER System remote control

If this cassette deck is connected to other PIONEER components bearing the mark, you will be able to operate all of the connected components with one remote control unit.

CONTROL IN jack

Use the enclosed mini-plug cord to connect this jack to the CONTROL OUT jack of another component equipped with PIONEER System remote control (bearing the mark).

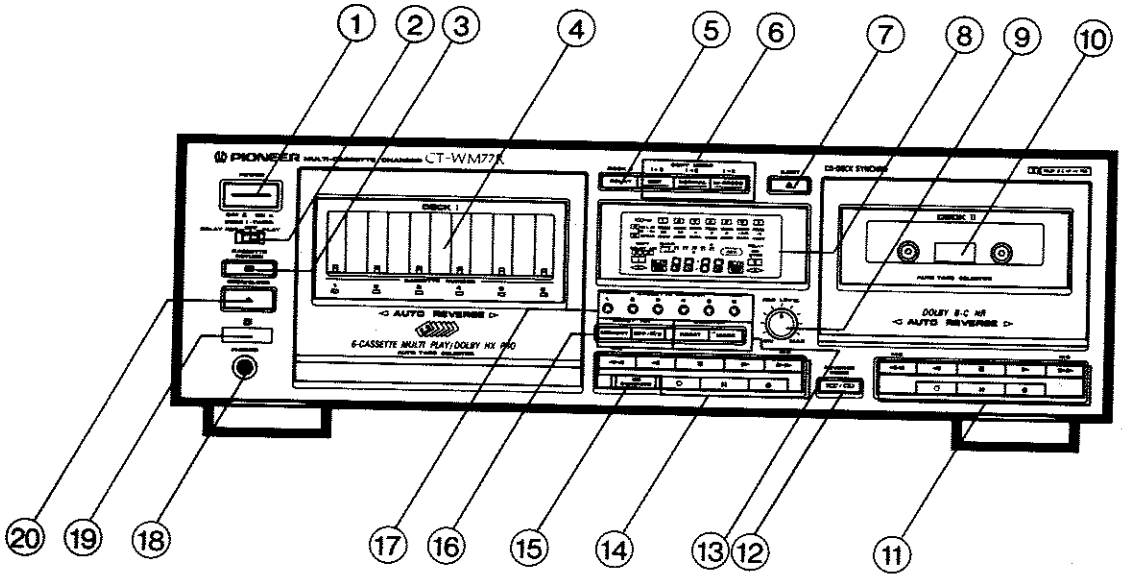
CONTROL OUT jack

Intermediary jack which outputs signals from the CONTROL IN jack of this cassette deck to the input jack of another component. Connect this jack to the CONTROL IN jack of another component compatible with PIONEER System remote control.

NOTE:

When the system remote control cord is connected to the CONTROL IN jack, the remote control sensor window will not operate.

FRONT PANEL FACILITIES



① **POWER switch**
When the POWER switch is pressed to turn the cassette deck on, the 6 cassette indicators on the cassette door flash to indicate that the circuits are warming up. After about 10 seconds, the circuits become stable and the cassette deck can be operated.

All the indicators in the display window will light when the power is turned on. The display will be set to its normal state when one of the operation buttons is pressed.

② **DECK I TIMER switch**
Use this switch to select the timer relay recording or timer relay playback functions (see pages 26 and 27).

③ **CASSETTE RETURN button**
Press this button to return the loaded cassette to the tray.

④ **DECK I Cassette door and tray**
All of the cassette indicators on the cassette door flash while the cassette deck is warming up. When the cassette door is closed and there are cassettes on the tray, the indicators for the tray slots which contain cassette tapes (including the currently loaded tape) will light. When a cassette is being loaded from the tray, the corresponding indicator flashes.

⑤ **RELAY button**
Press this button to select relay recording or relay playback. The RELAY indicator lights when relay mode is selected.

⑥ **COPY MODE buttons**

EDIT (I ▷ II): Press this button to perform tape editing and copying from DECK I to DECK II (see pages 22 and 23).

NORMAL (I ◁ II): Press this button to copy a tape from DECK II to DECK I (see page 21).

HI-SPEED (I ◁ II): Press this button to copy a tape from DECK II to DECK I at twice the normal speed (see page 21).

⑦ **DECK II Eject button (EJECT)**
Press this button to open the cassette door of DECK II.

NOTE:
The cassette door cannot be opened while the tape is running (recording, playback, etc.). Press the stop (■) button of DECK II before pressing this button.

⑧ **Display window**
See page 10.

⑨ **REC LEVEL control knob**
See page 16.

⑩ **DECK II Cassette door**

⑪ **DECK II Operation buttons**

Recording (●):
When this button is pressed, the cassette deck enters recording standby mode. Recording begins when the play (▶ or ◀) button or pause (❚❚) button is pressed.

Pause (❚❚):
Press this button to temporarily pause recording or playback. Press the button again to resume recording or playback. The pause button cannot be used during fast-forward or fast-reverse. If this button is pressed after the recording (●) button is pressed, recording will begin.

Recording mute (○):
When this button is pressed during recording, the cassette deck creates a 4-second blank space on the tape and then enters recording standby mode.
If the button is pressed and held, the deck continues to create a blank space until the button is released (see page 16).

Fast-forward (▶▶):
If this button is pressed during stop mode, the tape is fast-forwarded in the direction of the arrows (towards the end of side A or the beginning of side B). If it is pressed during playback, the cassette deck skips forward one selection for each press of the button (up to 15 selections), and playback resumes at the beginning of the designated selection (see MUSIC SEARCH, page 19).

Forward play (▶):
During stop mode, press this button to begin playback of side A; that is, the side facing outward (forward playback).
During recording standby mode, press this button to begin recording on side A.

Stop (■):
Press this button to stop the tape transport.

Reverse play (◀):
Press this button to begin playback of side B; that is, the side facing the rear of the cassette deck (reverse playback).
During recording standby mode, press this button to begin recording on side B.

Fast-reverse (◀◀):
If this button is pressed during stop mode, the tape is fast-forwarded in the direction of the arrows (towards the beginning of side A or the end of side B). If it is pressed during playback, the playback position skips backward by one selection for each press of the button (up to 15 selections), and playback resumes at the beginning of the designated selection (see MUSIC SEARCH, page 19).

⑫ REVERSE MODE button
Use this button to choose the tape transport mode.
⇄: One way mode. Tape transport stops after one side of a tape is played or recorded.
When relay mode is selected, after one cassette ends, playback or recording (of one side only) continues on the cassette in the next tape slot, and so on until the cassette in the highest numbered tape slot is reached.
⇆: Reverse mode. During playback, both sides of the tape are played back continuously until the tape has been played back 8 times (16 sides). During recording, both sides of the tape are recorded, and then tape transport stops.
When relay mode is selected, after both sides of one cassette have been recorded or played back once, playback or recording continues on the cassette in the next tape slot, and so on until the cassette in the highest numbered tape slot is reached.

NOTE:
During recording, relay playback and random playback, the auto reverse function will only operate when the tape is moving from the end of side A to the beginning of side B.
The tape cannot move automatically from the end of side B to the beginning of side A during these modes (i.e., the tape will stop at the end of side B even when reverse mode is selected). This indicates that the cassette deck will switch automatically from side A to side B, but will not switch automatically from side B to side A. If, for example, recording is started from the beginning of side B, the tape will stop after only one side is recorded, even though reverse mode is selected.

⑬ COUNTER buttons
MODE: Each time this button is pressed, the multifunction display switches between tape counter display mode and time counter display mode.
RESET: When this button is pressed, the tape counter is reset to 0000 and the time counter is reset to 00:00.

⑭ DECK I Operation buttons
These buttons operate in the same way as the operation buttons of DECK II, with the following exceptions:
Forward play (▶):
If the tray is open when this button is pressed, it will close automatically, the cassette in the lowest numbered slot will be loaded, and side A will be played back.
Reverse play (◀):
If the tray is open when this button is pressed, it will close automatically, the cassette in the lowest numbered slot will be loaded, and side B will be played back.

⑮ CD-Deck synchro recording button (CD SYNCHRO)
See pages 24 and 25.

⑯ DOLBY* NR buttons
DOLBY NR MEMORY button:
Press this button to begin setting the DOLBY NR system, or to check the current DOLBY NR settings (see page 16).
DOLBY NR OFF/B/C button:
Press this button repeatedly to select the desired type of DOLBY NR. The selected type of DOLBY NR (B or C) is displayed. If no display appears, DOLBY NR OFF is selected.
When playing back Dolby NR-encoded tapes, always select the same position (OFF, B or C) used for recording.

*
- *Dolby noise reduction and HX PRO headroom extension manufactured under license from Dolby Laboratories Licensing Corporation. HX PRO originated by Bang & Olufsen.*
- *"Dolby", the double-D symbol ⧈ and "HX PRO" are trademarks of Dolby Laboratories Licensing Corporation.*

⑰ CASSETTE NUMBER buttons (1 — 6)
Press one of these buttons to select the cassette which will be loaded from the tray into the tape transport mechanism of DECK I.

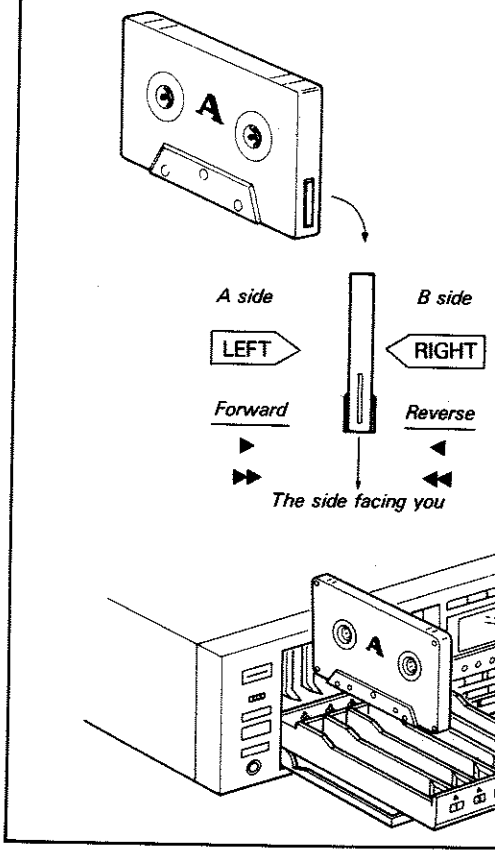
⑱ PHONES jack
This jack is designed for standard stereo headphones with a 6.3mm diameter plug.

⑲ Remote control sensor window
Receives infrared signals from the remote control unit.

⑳ DECK I OPEN/CLOSE button (⏏)
Press this button to open the cassette door. When the door is open, cassette tapes can be placed onto or removed from the tray. If a cassette is loaded in the tape transport mechanism (see page 5), the door can still be opened and tapes can be added or removed. However, DO NOT place a cassette in the tray slot previously occupied by the loaded cassette.

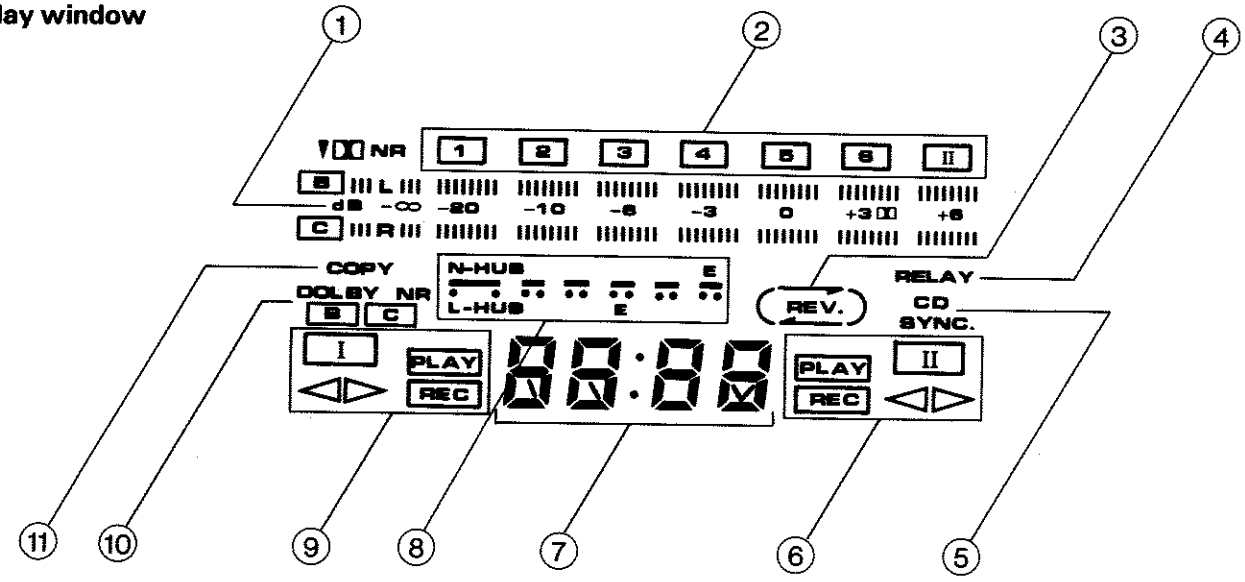
NOTE:
The cassette tray cannot be opened unless the POWER switch is turned OFF.

NOTE:
Please keep the diagram below in mind while operating the cassette deck. This will help you to avoid misoperations.



FRONT PANEL FACILITIES

Display window



① **Level meter**
Indicates the left and right channel signal levels. Indicates the recording level during recording, and the recorded level during playback. The ▯▯ mark beside +3 indicates the Dolby NR system standard level. The level meter on this cassette deck has a peak hold function which continues to display the peak level for 2 seconds, to make adjustment of the recording level easier.

② **Cassette number indicators/DECK II indicator**
The cassette number indicators light when the indicated cassette has been loaded into the tape transport mechanism of DECK I. When the DOLBY NR MEMORY button is pressed, the selected type of Dolby noise reduction for each tape is displayed below the cassette number and DECK II indicators (see page 16).

③ **Reverse mode indicator (REV.)**
Indicates the tape transport mode:
⇄ : One way mode is selected.
(REV) : Reverse mode is selected.
NOTE:
During recording, relay playback and random playback, the auto reverse function will only operate when the tape is moving from the end of side A to the beginning of side B.
The tape cannot move automatically from the end of side B to the beginning of side A during these modes (i.e., the tape will stop at the end of side B even when reverse mode is selected).

④ **RELAY indicator**
Lights when the cassette deck is in relay mode.

⑤ **CD Synchro indicator (CD SYNC.)**
Lights when synchro recording from a CD player is being carried out.
See pages 24 and 25.

⑥ **DECK II Tape transport indicators (II)**
See page 12.

⑦ **Multifunction display**
See pages 13 and 19.

⑧ **DECK I Remaining time indicators**
Indicate the approximate time remaining on the tape during recording and playback. When the tape is close to the end, each indicator will flash and then go off in sequence (see page 13).

⑨ **DECK I Tape transport indicators (I)**
See page 12.

⑩ **DOLBY B/C NR indicator**
Indicates the selected type of Dolby noise reduction (B-type or C-type). If neither indicator lights, the DOLBY NR system is OFF.

⑪ **COPY indicator**
Lights when NORMAL copy mode is selected.
Flashes when HI-SPEED copy mode is selected.

Dolby HX PRO Headroom Extension System (DECK I only)

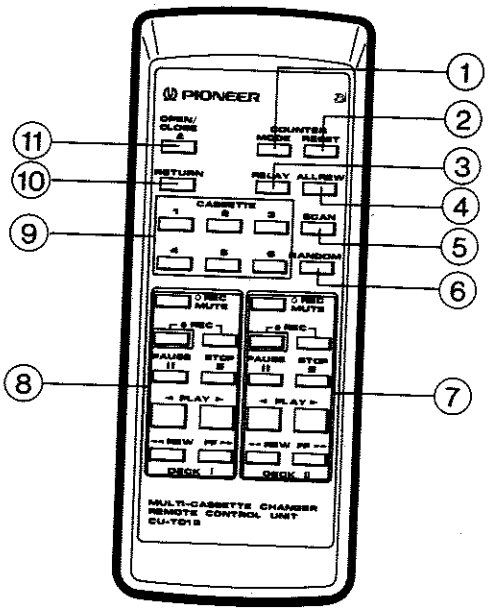
The Dolby HX PRO system controls the level of signals during recording and always keeps it at an optimal level according to the level of the high frequency components of the music signal and the tape bias. It therefore provides excellent recording quality even when recording signals from digital sources which contain a large amount of high-frequency components. To guarantee optimal recording results, The HX PRO system is activated automatically when recording begins. The Dolby HX PRO system operates regardless of the setting of the Dolby NR system buttons.

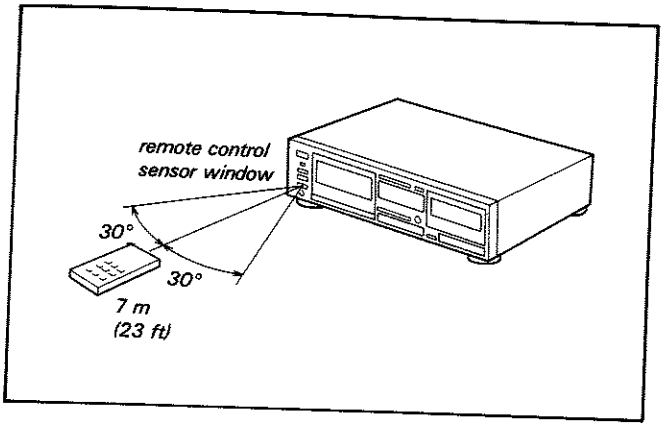
Dolby NR Systems

The Dolby NR systems are designed to reduce the amount of tape hiss, mainly in the treble components. During recording, the high-pitched pianissimo sounds which are most characteristic of audible noise are boosted, and during playback, only those boosted sections are attenuated, so that tape sound is returned to normal. As a result, the noise is attenuated by an amount equal to the boosting in the treble range. The Dolby B-type NR system reduces noise in the treble range, cutting tape hiss and expanding the dynamic range.
The Dolby C-type NR system is even more effective in reducing noise, as it cuts the noise from the mid-range on.

NOTE:
When a tape has been recorded using Dolby B-type or C-type noise reduction, make sure that the DOLBY NR buttons are set to the same position during playback.

REMOTE CONTROL UNIT





REMOTE CONTROL UNIT

- The remote control unit buttons operate in the same way as the cassette deck buttons.

① **COUNTER MODE button**
See page 13.

② **COUNTER RESET button**
See page 13.

③ **RELAY button**
See pages 8 and 19.

④ **All rewind button (ALL REW)**
Press this button to rewind all the cassette tapes in DECK I to the beginning of side A, beginning with the cassette in the lowest numbered slot. "ALL" appears on the multifunction display when the button is pressed.

⑤ **SCAN button**
See page 19.

⑥ **RANDOM button**
See page 19.

⑦ **DECK II Operation buttons**
See page 8.

⑧ **DECK I Operation buttons**
See page 8.

⑨ **CASSETTE NUMBER buttons (1 ~6)**
See page 9.

⑩ **RETURN button**
Press this button to return the tape currently loaded in DECK I to the tray.

⑪ **OPEN/CLOSE button (⏏)**
See page 8.

NOTES:

- *Remote control will not be possible if there is an obstacle between the remote control unit itself and the remote control sensor window of the cassette deck.*
- *If there is no response even when the remote control is used directly in front of the cassette deck, the batteries may need to be replaced.*
- *Performance of the remote control unit is adversely affected by strong fluorescent light. Keep such lights away from the sensor window in particular.*

OPERATION OF DECK I WITH A REMOTE CONTROL UNIT NOT DESIGNED FOR DOUBLE DECKS (System remote control)

Selecting DECK I

In order to operate DECK I with the remote control unit, adjust the cassette deck as follows: With the power off, press and hold the stop (■) button of DECK I, and turn the power on. Continue to hold the stop (■) button until the cassette indicators on the door stop flashing. DECK I can now be operated using the remote control unit, but DECK II cannot.

Switching to DECK II

To restore remote control operation to DECK II, press the stop (■) button of DECK II while DECK II is in stop mode. DECK II can now be operated using the remote control unit. Remote control operation can be switched back and forth between DECK I and DECK II by pressing the stop (■) button of the desired deck while it is in stop mode.

NOTE:

If the power supply is turned off, or if a power failure or a sudden change in the power supply (caused by lightning, etc.) occurs, the cassette deck is reset to its original state. Only DECK II can be operated by remote control. To restore operation to either deck, repeat the procedure above from the beginning.

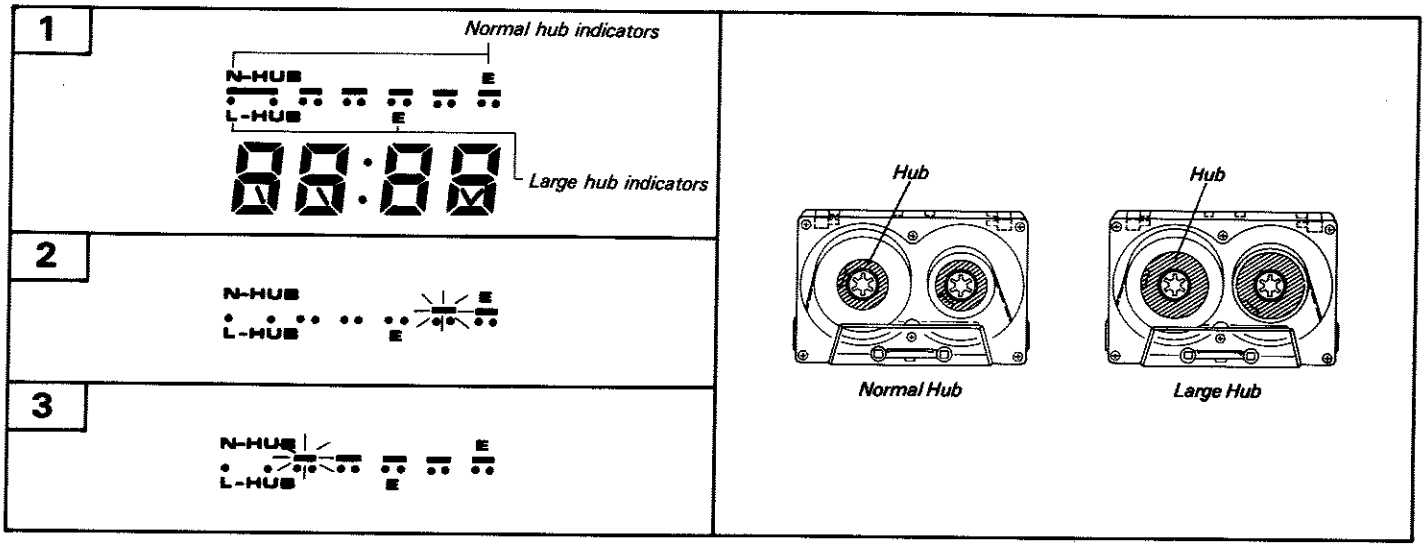
INDICATORS

Tape transport indicators

The illustrations below show what the DECK I tape transport indicators look like during each of the various modes.
The DECK II indicators operate in the same way, but the positions of the play (PLAY) and recording (REC) indicators, and the arrows are reversed.

	Forward (side A)	Reverse (side B)
Stop mode		
Playback mode	PLAY	PLAY
Recording mode	REC	REC
Fast-forward mode	*Flashes rapidly*	*Flashes rapidly*
Fast-reverse mode	*Flashes rapidly*	*Flashes rapidly*
Recording standby mode	REC *Flashes slowly*	REC *Flashes slowly*
Play pause mode	PLAY *Flashes slowly*	PLAY *Flashes slowly*
Recording mute mode	REC *Flashes slowly*	REC *Flashes slowly*
Music search (Forward)	PLAY *Flashes rapidly*	PLAY *Flashes rapidly*
Music search (Reverse)	PLAY *Flashes rapidly*	PLAY *Flashes rapidly*

INDICATORS



DECK I Tape remaining time indicators
These indicators show the approximate amount of time remaining on the tape when the cassette deck is in the recording or playback mode. When the tape nears its end, the indicators flash and then go out one by one. The indicated time remaining will vary depending on the type of tape and the size of the hub.
When the tape nears its end, the remaining time indicators flash and go out one by one. Each indicator represents approximately 2 minutes of remaining time when using a C-60 or C-46 cassette tape, or approximately 2-1/2 to 3 minutes when using a C-90 cassette tape. When a tape with a large hub is used, the L-HUB "E" (end) indicator (the fourth indicator) indicates the end of the tape. When a tape with normal hub is used, the N-HUB "E" (end) indicator (the sixth indicator) indicates the end of the tape. (Fig.1)

EXAMPLES
- During recording or playback of a C-90 tape with a normal hub. (Fig.2 above)
  2 min. 30 sec. × 2 indicators = about 5 minutes remaining.
- During recording or playback of a C-46 tape with a large hub. (Fig.3 above)
  2 min. × 3 indicators = approximately 6 minutes remaining.

NOTES:
- *When the "E" (end) indicator begins to flash, the tape will end soon.*
- *The function of the remaining time indicators varies somewhat depending on the thickness of the tape and the size of the hub.*
- *A standard "large" hub is about 1.1 inch (27 mm) in diameter. If the loaded tape has a hub larger than that, the indicators may be incorrect.*

USING THE COUNTER
The multifunction display of this cassette deck can be switched between the tape counter display mode and the time counter display mode by pressing the COUNTER MODE button.
Tape counter:
The displayed number increases or decreases as the tape is forwarded or reversed.
Time counter:
This counter displays the amount of time (in minutes and seconds) which has elapsed since the start of playback or recording.

Before starting playback or recording, press the COUNTER RESET button to reset the tape counter to 0000 and the time counter to 00:00. Jotting down the value displayed on the counter at important points during recording or playback makes it easy to find those points later.

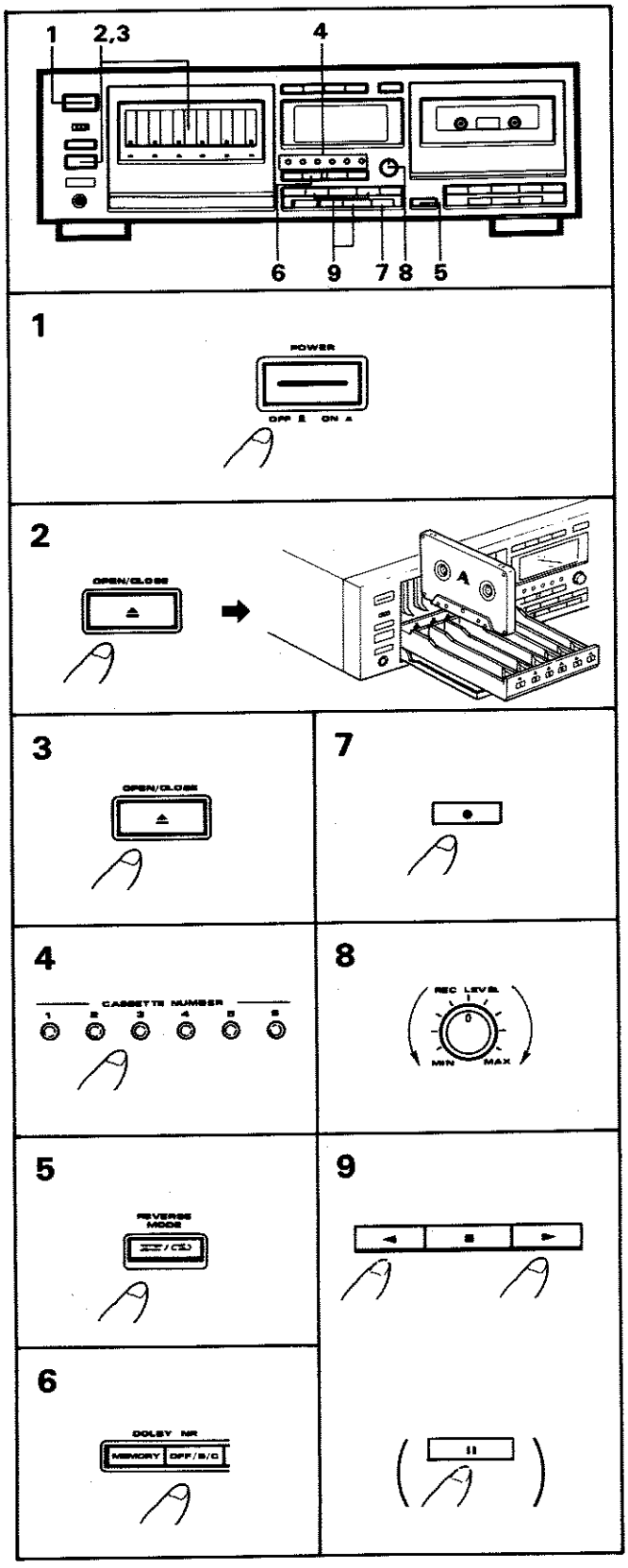
NOTE:
The time counter displays only the recording or playback time. If a fast-forward, fast-reverse, or music search operation is carried out during recording or playback, the time counter stops and the multifunction display switches to the tape counter display mode. When recording or playback is resumed, it returns to time counter display mode, and the time counter begins again.

Do not turn off the power in mid-operation
If the POWER switch is turned off and then on again, the tape counter is reset to 0000.

The tape counter may display information about either DECK I or DECK II
The factors below determine which deck's tape counter information will be displayed.
- When a cassette tape is inserted into a deck. The tape counter will display information about that deck.
- If a cassette tape is inserted into one deck while the other deck is operating, the tape counter will display information on the deck into which the tape was inserted.
- When a cassette tape is removed from one deck, the tape counter will display information about the other deck.
  - If the tape in DECK I is changed, but the cassette tray is not opened (e.g., another tape from the tray is loaded), the tape counter will display information on DECK I.
- When an operation button is pressed, the tape counter will display information on the deck whose operation button was pressed.
  - If no cassette tape is loaded in the deck, the display will not change.
- If neither deck contains a tape, the tape counter will display information on DECK II.
- The counter indicator will not change from one deck to the other automatically.
  If you want to change the tape counter indication from one deck to the other during operation, press an operation button according to current operating mode of the disired deck.

EXAMPLE:
To change the tape counter to DECK I is currentry in recording mode, and DECK II is in stop mode.
Press the recording (●) button.
To change the tape counter to DECK II, press the stop (■) button.

RECORDING (DECK I)



- Before turning on the POWER switch, make sure that the DECK I TIMER switch is set to OFF. If the DECK I TIMER switch is set to RELAY REC or PLAY, recording or playback will automatically begin approximately 10 seconds after the POWER switch is turned on.

1. **Turn the POWER switch on.**
2. **Place the cassettes on the tray.**

Press the OPEN/CLOSE button and the tray will automatically slide open. Insert the cassettes with side A on the left, and the exposed (tape) side facing down. The tray can hold up to 6 cassettes at a time.

3. **Press the OPEN/CLOSE button to close the tray.**
4. **Press one of the CASSETTE NUMBER buttons to load the cassette for recording.**
5. **Select the desired tape transport mode with the REVERSE MODE button.**

- To record on both sides of the tape, select "⇄" (reverse mode).
- To record on only one side of the tape, select "⇉" (one way mode).

6. **Select the desired type of Dolby noise reduction with the DOLBY NR buttons (see page 16).**
7. **Press the recording (●) button to enter recording standby mode.**
8. **Adjust the recording level using the REC LEVEL control knob.**

With the amplifier, select the audio source you wish to record and use the REC LEVEL control knob to adjust the recording level (see ADJUSTING THE RECORDING LEVEL, page 16).

9. **Start recording by pressing the appropriate play (▶ or ◀) button or the pause (❚❚) button.**

One way mode recording (⇉)
Press the forward play (▶) button to record on side A. Press the reverse play (◀) button to record on side B.

Reverse mode recording (⇄)
Press the forward play (▶) button to begin recording on both sides. If the reverse play (◀) button is pressed, recording will stop after only one side is recorded.

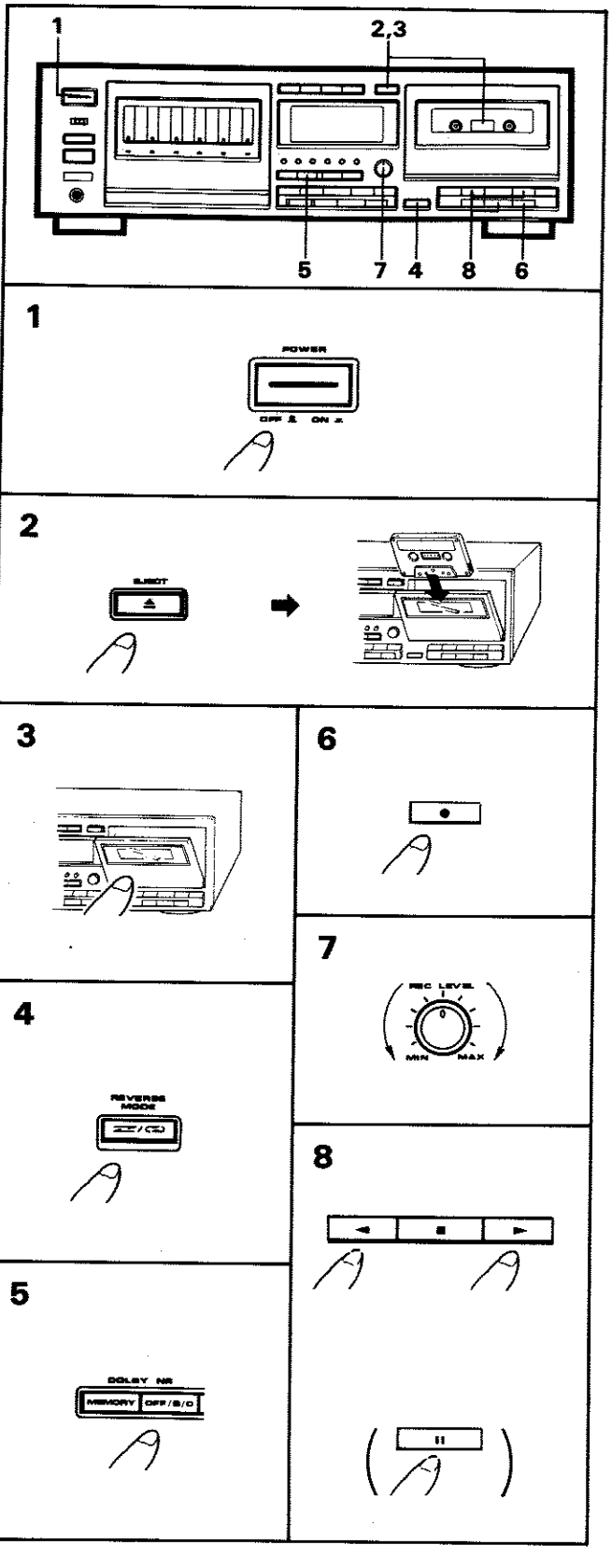
NOTES:

- *If the pause (❚❚) button is pressed, recording will begin. The tape transport direction will be the direction displayed by the tape transport indicators when the button is pressed.*
- *During recording, the CASSETTE RETURN and CASSETTE NUMBER buttons do not operate.*
- *The cassette deck will not record on tapes whose erasure prevention tabs have been removed. Make sure that the tabs are intact before loading the tape for recording. If the tabs have been removed, put a piece of adhesive tape over the hole (see page 6).*

To stop recording
Press the stop (■) button.

To pause recording
Press the pause (❚❚) button. To resume recording, press the pause button again or press the appropriate play (▶ or ◀) button.

RECORDING (DECK II)



- Before turning on the POWER switch, make sure that the DECK I TIMER switch is set to OFF. If the DECK I TIMER switch is set to RELAY REC or PLAY, recording or playback will automatically begin approximately 10 seconds after the POWER switch is turned on.

1. **Turn the POWER switch on.**
2. **Press the EJECT button to open the cassette door.**
3. **Insert a cassette and close the door.**

Insert the cassette with side A facing out and the exposed (tape) side facing down.

4. **Select the desired tape transport mode with the REVERSE MODE button.**

- To record on both sides of the tape, select "⇄" (reverse mode).
- To record on only one side of the tape, select "⇉" (one way mode).

5. **Select the desired type of Dolby noise reduction with the DOLBY NR buttons (see page 16).**
6. **Press the recording (●) button to enter recording stand-by mode.**
7. **Adjust the recording level using the REC LEVEL control knob.**

With the amplifier, select the audio source you wish to record and use the REC LEVEL control knob to adjust the recording level (see ADJUSTING THE RECORDING LEVEL, page 16).

8. **Start recording by pressing the appropriate play (▶ or ◀) button or the pause (❚❚) button.**

One way mode recording (⇉)
Press the forward play (▶) button to record on side A. Press the reverse play (◀) button to record on side B.

Reverse mode recording (⇄)
Press the forward play (▶) button to begin recording on both sides. If the reverse play (◀) button is pressed, recording will stop after only one side is recorded.

NOTES:

- *If the pause (❚❚) button is pressed, recording will begin. The tape transport direction will be the direction displayed by the tape transport indicators when the button is pressed.*
- *The cassette deck will not record on tapes whose erasure prevention tabs have been removed. Make sure that the tabs are intact before loading the tape for recording. If the tabs have been removed, put a piece of adhesive tape over the hole (see page 6).*

To stop recording
Press the stop (■) button.

To pause recording
Press the pause (❚❚) button. To resume recording, press the pause button again or press the appropriate play (▶ or ◀) button.

ADDITIONAL RECORDING OPERATIONS

SETTING THE DOLBY NR SYSTEM

This cassette deck allows you to preprogram a different Dolby NR setting for each tape in DECK I. This lets you perform relay recording or relay playback of tapes with different types of Dolby NR.

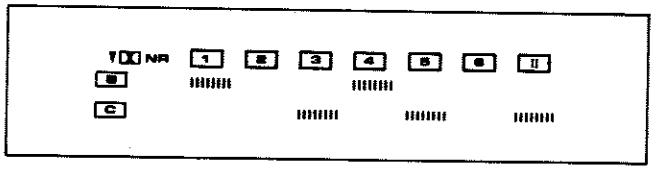
The Dolby NR setting of DECK II is selected with the same buttons.

- To check the currently programmed Dolby NR settings: Press the DOLBY NR MEMORY button. The current settings appear on the display.

EXAMPLE:

The sample display below indicates the following preprogrammed Dolby NR selections:

tape 1: B-type, tape 2: off, tape 3: C-type, tape 4: B-type, tape 5: C-type, tape 6: off, DECK II: C-type.



Programming the Dolby NR settings of each tape (DECK I, DECK II)

1. **Press the DOLBY NR MEMORY button.**
- The currently programmed settings are displayed.
2. **Press the DOLBY NR OFF/B/C button repeatedly until the desired setting is displayed. (When no display appears, OFF is selected.)**
3. **Press one of the CASSETTE NUMBER buttons.**
- The selected tape is programmed to record or playback with the type of Dolby NR selected in step 2.
4. **Repeat steps 2 and 3 for the other tapes on the tray.**
5. **To set the Dolby NR for the tape in DECK II, press the DOLBY NR OFF/B/C button repeatedly until the desired setting is displayed. (When no display appears, OFF is selected.)**
6. **Press the stop (■) button of DECK II.**

To change the Dolby NR setting during recording or playback:

Press the DOLBY NR OFF/B/C button until the desired setting is displayed. The memorized setting for the tape which is currently being recorded or played back will also change.

- During tape copying, only the Dolby NR setting of the playback tape will change.

To change the Dolby NR setting during stop mode:

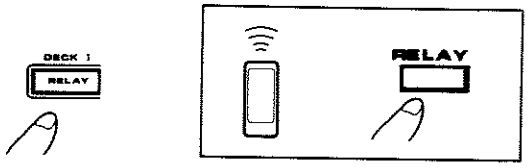
Press the DOLBY NR OFF/B/C button until the desired setting is displayed. The current Dolby setting changes and the memorized setting for the currently loaded tape will change.

- The tape transport "I" and "II" indicators and cassette number indicators display the location of the cassette whose Dolby NR setting has been changed.

NOTES:

- *The DOLBY NR MEMORY button switches the level meter from normal (audio level) display mode to Dolby NR memory display mode.*
- *About 5 seconds after the DOLBY NR MEMORY button is released, the normal level meter display reappears.*
- *During the Dolby NR setting procedure, none of the other operation buttons will function.*
- *In step 3 and 6 of the procedure above, the display will not change until one of the CASSETTE NUMBER buttons (or the stop button of DECK II) is pressed.*

RELAY RECORDING (DECK I only)



When relay recording is selected, the tapes will be recorded in order from the cassette in the lowest numbered slot to the cassette in the highest numbered slot. To select relay recording, press the RELAY button after starting to record, or press the RELAY button during stop mode, and then press the recording (●) button and the play (▶ or ◀) button to start recording.

NOTE:

If the erasure prevention tabs from any of the loaded cassettes have been removed, the cassette deck will stop when it encounters the removed tab (i.e., when it attempts to begin recording on the protected side). Relay recording is terminated.

If the reverse play (◀) button is pressed, recording of the 1st cassette tape starts from side B, but recording of the rest of the cassette tapes begins from side A.

CREATING BLANK SECTIONS BETWEEN TRACKS

While the cassette deck is in recording mode, press the recording mute (○) button. The REC indicator will begin flashing and the cassette deck will create a blank section on the tape approximately 4 seconds long. The deck will then enter recording standby mode. To resume recording, press the pause (❚❚) button. If the recording mute (○) button is pressed and held, the cassette deck will continue to record a blank section until the button is released. When the button is released, the cassette deck will enter recording standby mode.

ERASING THE TAPE

1. **Set the REC LEVEL control knob to the "MIN" position.**
2. **Press the recording (●) button.**
3. **Press the play (▶ or ◀) button or pause (❚❚) button.**

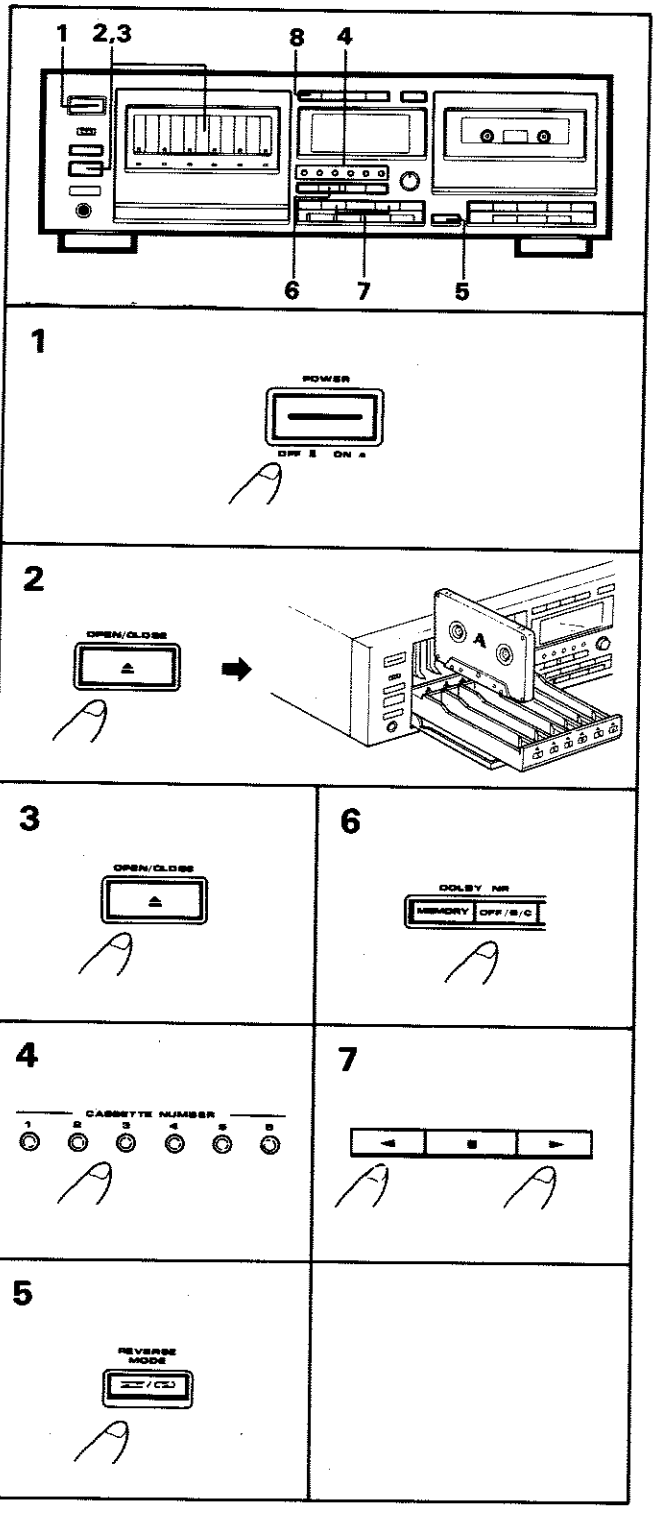
ADJUSTING THE RECORDING LEVEL

The adjustment of the recording level is the most important factor in achieving good recording results. A high level provides a good signal-to-noise ratio and dynamic range, but an excessively high level distorts the sound. If the level is set too low for fear of sound distortion, irritating tape hiss will mar the recording. The characteristics of tapes differ depending on the manufacturer and the type of tape. Set the REC LEVEL control knob so that the level meter's "+3dB" indicator lights momentarily at peaks. When using metal tapes, it is not harmful if the "+6dB" indicator lights occasionally at peaks. The level meter on this cassette deck has a peak hold function, which continues to display the peak level for 2 seconds, to make adjustment of the recording level easier.

NOTE:

The optimum recording level may differ somewhat, depending on the audio source and type of tape used. In order to obtain the best possible results, set the recording level after actual testing. Listen to your recordings, and adjust the level as necessary.

PLAYBACK (DECK I)



1. **Turn the POWER switch on.**
2. **Place the cassettes on the tray.**

Press the OPEN/CLOSE button to open the tray.

3. **Press the OPEN/CLOSE button to close the tray.**
4. **Press one of the CASSETTE NUMBER buttons to load the cassette for playback.**
5. **Select the desired tape transport mode with the REVERSE MODE button.**

- To repeatedly play both sides of the tape, select "⇄" (reverse mode).
- To play only one side of the tape, select "⇒" (one way mode).

6. **Select the desired type of Dolby noise reduction with the DOLBY NR buttons (see page 16).**

Use the same type of Dolby NR that was used for recording.

7. **Start playback by pressing the appropriate play (▶ or ◀) button.**

- If none of the CASSETTE NUMBER buttons is pressed in step 4, the cassette in the lowest numbered slot will be loaded automatically.

One way mode playback (⇒)
Press the forward play (▶) button to begin playback of side A. Press the reverse play (◀) button to playback of side B.

Reverse mode playback (⇄)
Press the forward play (▶) button to begin playback from side A, or press the reverse play (◀) button to begin playback from side B. Playback of both sides will continue until the tape has been played back 8 times (16 sides).

To stop playback
Press the stop (■) button.

To temporarily pause playback
Press the pause (❚❚) button. To resume playback, press the pause button again, or press the appropriate play (◀ or ▶) button.

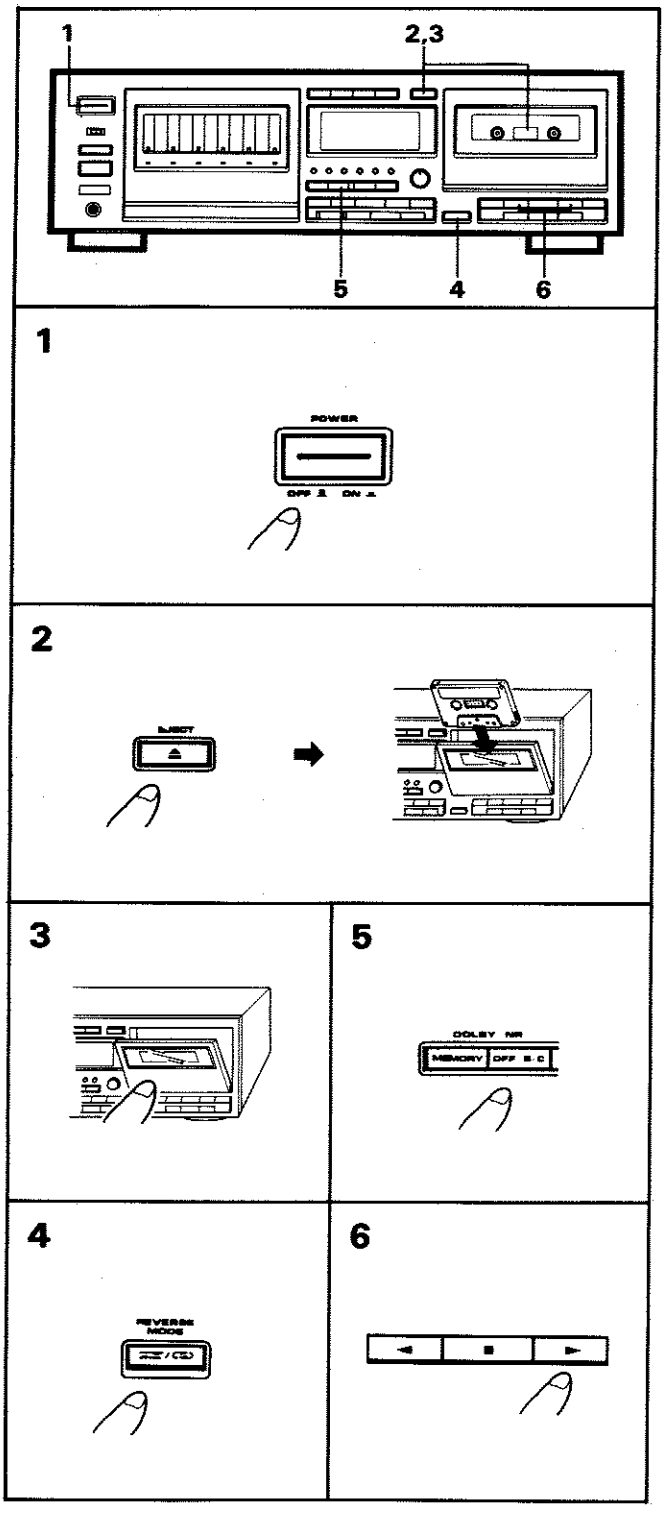
To fast-forward or fast-reverse the tape
The fast-forward or fast-reverse (◀◀ or ▶▶) buttons operate only when the cassette deck is in stop mode. If the tape is running, press the stop (■) button to stop the tape.

- If the forward tape transport indicator (▷) is lit (Side A is playing), press the fast-forward (▶▶) button to fast-forward the tape, or the fast-reverse (◀◀) button to fast-reverse the tape.
- If the reverse tape transport indicator (◁) is lit (Side B is playing), press the fast-reverse (◀◀) button to fast-forward the tape, or the fast-forward (▶▶) button to fast-reverse the tape.

BLANK SKIP FUNCTION (RELAY MODE ONLY)

If a blank section of tape is played back for more than 15 seconds, the cassette deck will automatically forward the tape to the beginning of the next track, or to the end of the tape.

PLAYBACK (DECK II)



1. Turn the POWER switch on.

2. Press the EJECT button to open the cassette door.

3. Insert the cassette and close the door.

Insert the cassette with side A facing out and the exposed (tape) side facing down.

4. Select the desired tape transport mode with the REVERSE MODE button.

- To repeatedly play both sides of the tape, select "⇄" (reverse mode).
- To play only one side of the tape, select "⇒" (one way mode).

5. Select the desired Dolby noise reduction with the DOLBY NR buttons (see page 16).

Use the same type of Dolby NR that was used for recording.

6. Start playback by pressing the appropriate play (▶ or ◀) button.

One way mode playback (⇒)

Press the forward play (▶) button to begin playback of side A. Press the reverse play (◀) button to begin playback of side B.

Reverse mode playback (⇄)

Press the forward play (▶) button to begin playback from side A, or press the reverse play (◀) button to begin playback from side B. Playback of both sides will continue until the tape has been played back 8 times (16 sides).

To stop playback

Press the stop (■) button.

To temporarily pause playback

Press the pause (❚❚) button. To resume playback, press the pause button again, or press the appropriate play (◀ or ▶) button.

To fast-forward or fast-reverse the tape

The fast-forward or fast-reverse (◀◀ or ▶▶) buttons operate only when the cassette deck is in stop mode. If the tape is running, press the stop (■) button to stop the tape.

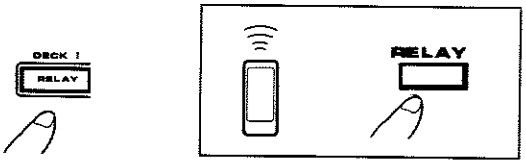
- If the forward tape transport indicator (▷) is lit (Side A is playing), press the fast-forward (▶▶) button to fast-forward the tape, or the fast-reverse (◀◀) button to fast-reverse the tape.
- If the reverse tape transport indicator (◁) is lit (Side B is playing), press the fast-reverse (◀◀) button to fast-forward the tape, or the fast-forward (▶▶) button to fast-reverse the tape.

NOTE:

The blank skip function operates during playback on DECK II (Relay mode only, see page 17).

PLAYBACK

RELAY PLAYBACK

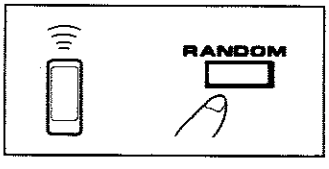


When relay playback is selected, the tapes will be played back in order, from the tape in the lowest numbered cassette slot to the tape in the highest numbered slot. Press the RELAY button during playback, or press the RELAY button during stop mode and then press the play (▶ or ◀) button. If the reverse play (◀) button is pressed, the first tape will begin playback from side B. However, the rest of the tapes will automatically begin playback from side A.

When one way mode (⇒) is selected:
One side of each tape is played back, then the next tape is loaded.
When reverse mode (⇄) is selected:
Both sides of each tape are played back, then the next tape is loaded. In order for both sides to be played back, all tapes must be rewound to the beginning of side A. If a tape is rewound to the beginning of side B, playback of that tape will end after one side (side B) has been played back, and the next tape will be loaded.

NOTE:
The blank skip function operates during relay playback (see page 17).

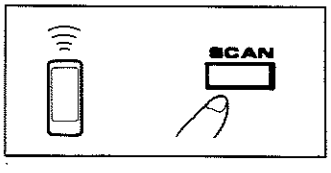
RANDOM PLAYBACK (DECK I only)



If the RANDOM button is pressed during stop mode or playback mode, "RANDM" will appear on the multifunction display, and all cassettes on the tray will be played back in a random order (Playback always begins from side A).
When one way mode (⇒) is selected:
The cassette deck will stop after one side of each tape has been played back.
When reverse mode (⇄) is selected:
The cassette deck will stop after both sides of each tape have been played back. If a tape is rewound to the beginning of side B, playback of that tape will end after only one side (side B) has been played back, and the next tape will be selected.

NOTE:
The blank skip function operates during random playback (see page 17).

SCAN PLAYBACK (DECK I only)



If the SCAN button is pressed during stop mode or playback mode, "SCAN" will appear on the multifunction display, and the first 10 seconds of all cassettes on the tray will be played back, beginning with the cassette in the lowest numbered slot (Playback always begins from side A).

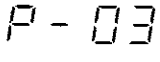
NOTE:
The blank skip function operates during scan playback (see page 17).

MUSIC SEARCH

By searching for and detecting the blank spaces between recorded tracks, the music search function can skip forward or backward automatically to the beginning of a designated track and begin playing that track. The music search function can skip forward or backward a maximum of 15 tracks. The selected track is shown on the multifunction display.

Returning to the beginning of the track which is currently playing:
If the forward tape transport indicator (▷) is lit (Side A is playing), press the fast-reverse (◀◀) button to return to the beginning of the current track. If the reverse tape transport indicator (◁) is lit (Side B is playing), press the fast-forward (▶▶) button to return to the beginning of current track.

Moving to a track located prior to the one which is playing:
If the forward tape transport indicator (▷) is lit (Side A is playing), press the fast-reverse (◀◀) button the same number of times as the number of tracks to be skipped plus one. If the reverse tape transport indicator (◁) is lit (Side B is playing), press the fast-forward (▶▶) button the same number of times as the number of tracks to be skipped plus one.
EXAMPLES:
To move to the track immediately prior to the current one, press the fast-forward or fast-reverse (◀◀ or ▶▶) button twice.
To move to the track located two tracks before the current one, press the fast-forward or fast-reverse (◀◀ or ▶▶) button three times. In the latter case, the following appears on the multifunction display:



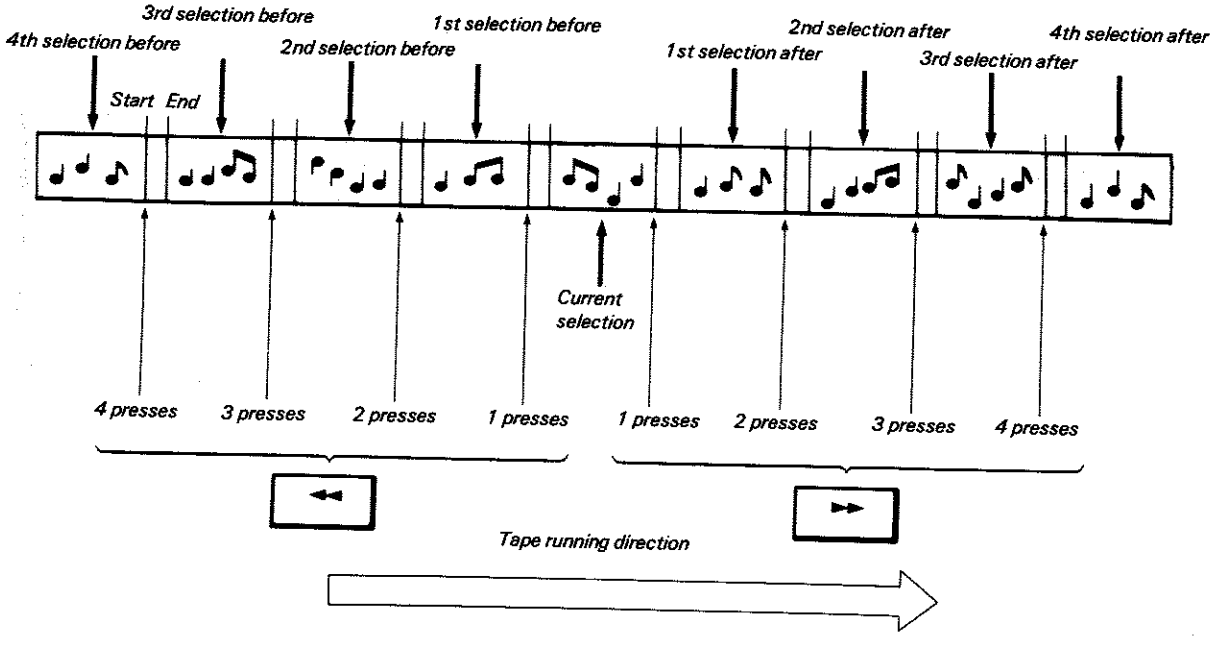
Moving to a track located after the one which is playing:
If the forward tape transport indicator (▷) is lit (Side A is playing), press the fast-forward (▶▶) button the same number of times as the number of tracks to be skipped. If the reverse tape transport indicator (◁) is lit (Side B is playing), press the fast-reverse (◀◀) button the same number of times as the number of tracks to be skipped.
EXAMPLES:
To move to the track immediately following the current one, press the fast-forward or fast-reverse (◀◀ or ▶▶) button once.
To move to the track located three tracks after the current one, press the fast-forward or fast-reverse (◀◀ or ▶▶) button three times. In the latter case, the following appears on the multifunction display:

MUSIC SEARCH

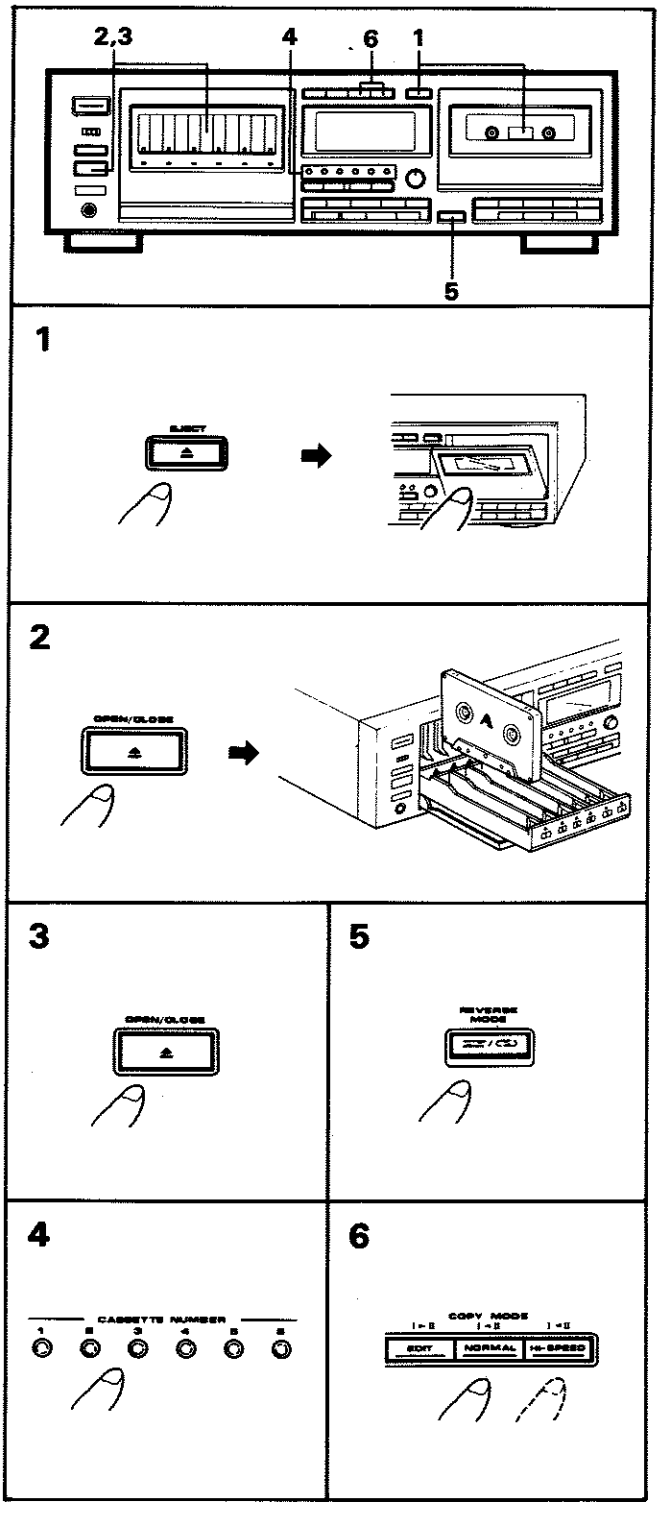
NOTES:

- *When the music search function skips backwards, it searches for and detects the blank spaces between each track, including the space prior to the track which is currently playing. Therefore, keep in mind that the fast-forward or fast-reverse (▶▶ or ◀◀) button must be pressed once for the current track, then the same number of times as tracks to be skipped (i.e. once more for the track immediately prior to the current one, twice more for the track two prior to the current one, etc.)*
- *If the blank spaces between tracks are of insufficient length, contain noise, or if there are quiet sections in the middle of tracks, music search may not operate properly. This is not a malfunction, but simply a result of the cassette deck's inability to properly locate the beginning and end of each track. The following types of tapes may cause such problems:*
  - *— Tapes which do not have blank spaces of at least 4 seconds between tracks.*
  - *— Classical music tapes, tapes of meetings or dialogues, and other tapes which contain pauses or quiet portions in the middle of a track.*
  - *— Tapes which contain excessive noise in the blank sections between tracks.*

EXAMPLE: When the forward tape transport indicator (▷) is lit



TAPE COPYING



COPYING A TAPE (DECK II TO DECK I)

1. **Load the cassette for playback in DECK II.**
- Tape copying must begin from side A. Therefore, make sure that the tape is rewound to the beginning of side A, and the forward play indicator (▷) is lit.

2. **Place the cassette(s) for recording on the cassette tray of DECK I.**
- Make sure that the erasure prevention tabs are intact.

3. **Press the OPEN/CLOSE button to close the tray.**

4. **Press one of the CASSETTE NUMBER buttons to load the tape for recording.**
- Tape copying must begin from side A. Therefore, make sure that the tape is rewound to the beginning of side A, and the forward play indicator (▷) is lit.

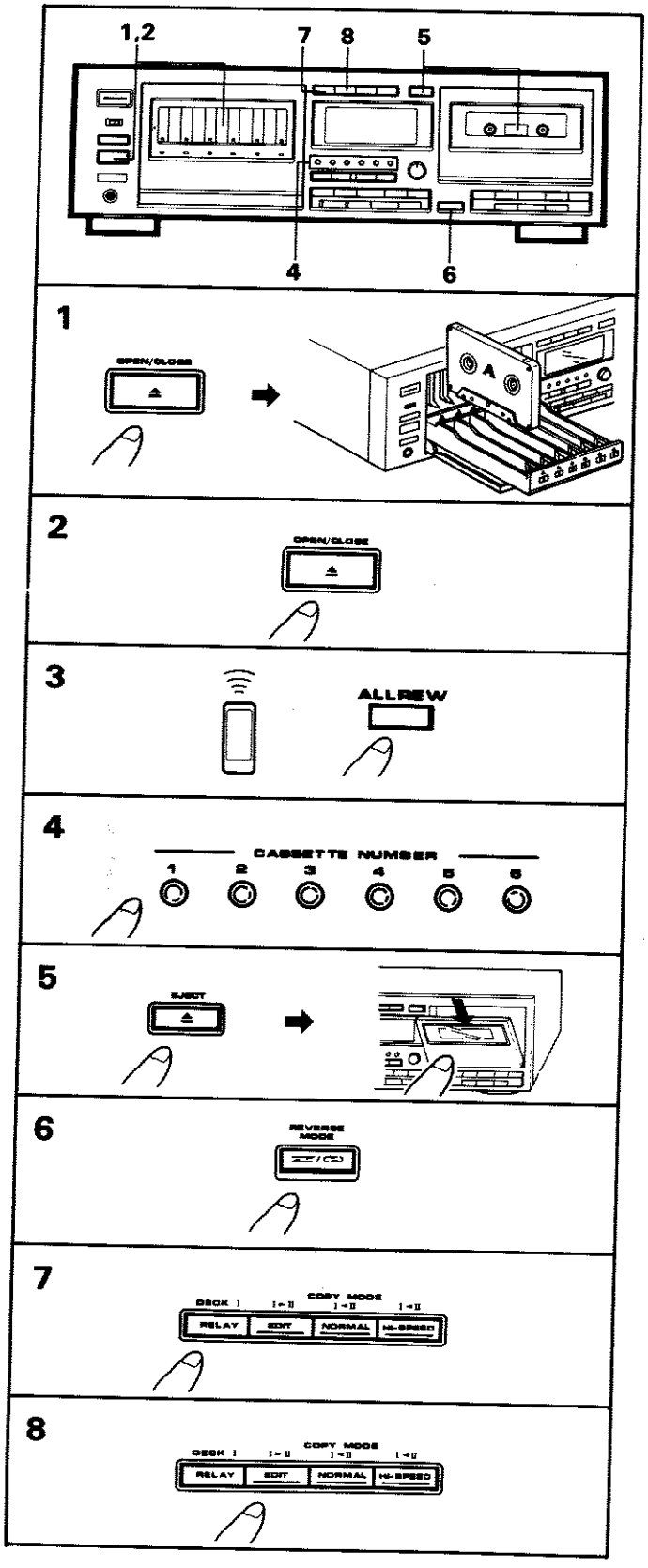
5. **Select the desired tape transport mode with the REVERSE MODE button.**
- To copy only one side of the tape, select "→" (one way mode).
- To copy both sides of the tape, select "⇄" (reverse mode).

6. **Press one of the COPY MODE buttons to select the desired copying mode:**
- To listen to the playback during copying, press the NORMAL button.
- To copy the tape at twice the normal playback speed, press the HI-SPEED button.
- The copied tape is recorded with the same Dolby noise reduction characteristics as the playback tape, regardless of the settings of the DOLBY NR system.

To stop in the middle of tape copying:
Press the stop (■) button of either DECK I or DECK II. Both decks will stop.

NOTES:
- *During HI-SPEED copying, none of the operation buttons will function, except the stop (■) button.*
- *During NORMAL copying, the recording mute (○) and pause (❚❚) buttons of DECK I also function.*
- *The blank skip function operates during tape copying (see page 17).*

Note on HI-SPEED Copying
If the cassette deck is located near a television set, a high pitched whistling sound may be recorded during high-speed copying. If this occurs, move the cassette deck away from the television set, use normal speed copying, or turn the television set off.



EDITING A TAPE (DECK I TO DECK II)

The EDIT mode allows you to copy the contents of up to 6 cassette tapes onto a single cassette tape (Relay Edit Copying), or to copy selections from one or more tapes in a desired order onto a single cassette tape (Edit Copying).

Relay Edit Copying

1. **Place the playback cassettes on the tray of DECK I.**
2. **Press the OPEN/CLOSE button to close the tray.**
3. **Press the ALL REW button on the remote control unit.**
   - All tapes in DECK I will be rewound to the beginning of side A.
4. **Press one of the CASSETTE NUMBER buttons to load the tape that will play first.**
   - Tape copying must begin from side A. Therefore, make sure that the tape is rewound to the beginning of side A, and the forward tape transport indicator (▷) is lit.
5. **Load the cassette for recording in DECK II.**
   - Make sure that the erasure prevention tabs are intact.
   - Tape copying must begin from side A. Therefore, make sure that the tape is rewound to the beginning of side A, and the forward tape transport indicator (▷) is lit.
6. **Select the desired tape transport mode with the REVERSE MODE button.**
   - To record on only one side of the tape, select "⇒" (one way mode).
   - To record on both sides of the tape, select "⇔" (reverse mode).
7. **Press the RELAY button.**
   - The cassette deck enters relay mode.
8. **Press the EDIT button.**
   - Tape copying begins, and the tapes in DECK I are automatically copied in numerical order (1-6).
   - The copied tape is recorded with the same Dolby noise reduction characteristics as the playback tape, regardless of the settings of the DOLBY NR system.

During tape copying:
The blank skip function operates during relay edit copying (see page 17).
While the cassette deck is forwarding the tape (blank skip), or while the tape is being changed, the recording deck enters stop mode. When the locates the next track, it enters stop mode. The recording deck rewinds to the end of the previous track and then enters recording mode. The playback deck will resume playback about 4 seconds later.

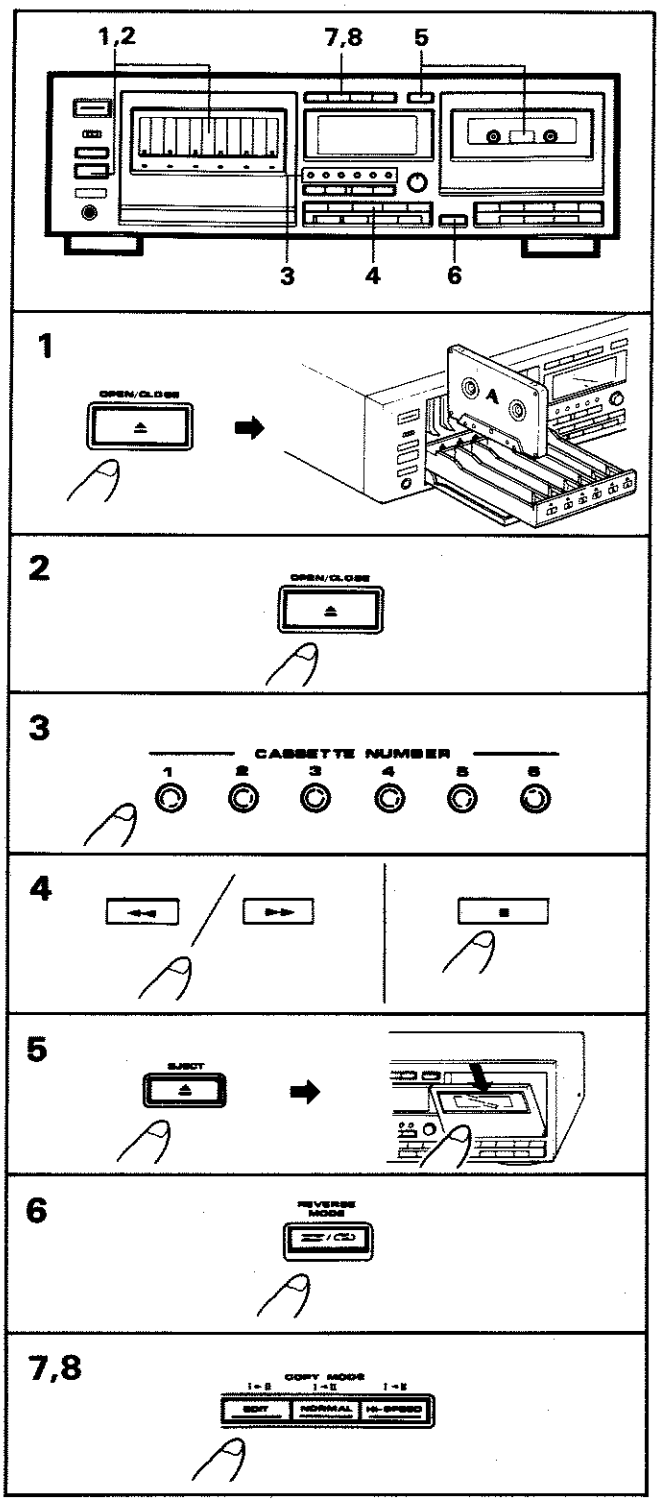
When the last track on the last tape ends:
Both DECK I and DECK II enter stop mode, and tape copying ends.

One way mode recording (⇒)
When the recording deck reaches the end of the first side of the tape, both DECK I and DECK II enter stop mode, and tape copying ends.

Reverse mode recording (⇔)
When the recording deck reaches the end of side A, the playback deck returns to the beginning of the selection which is currently playing and enters stop mode. Playback resumes about 10 seconds after the recording deck begins recording on side B.

To stop in the middle of tape copying:
Press the stop (■) button of either DECK I or DECK II. Both decks will stop.

NOTES:
- *During relay edit copying, none of the operation buttons will function, except the stop (■) button.*
- *During relay edit copying, the relay mode cannot be changed, even if the RELAY button is pressed.*
- *Depending on the characteristics of the tape, the blank skip function may, in some cases, fail to operate during relay edit copying. This is not a malfunction.*



NOTES:

- *During edit copying, none of the operation buttons will function, except the stop (■) button.*
- *During edit copying, the relay mode cannot be changed, even if the RELAY button is pressed.*
- *Depending on the characteristics of the tape, the blank skip function may, in some cases, fail to operate during edit copying. This is not a malfunction.*

Edit Copying

1. **Place the playback cassettes on the tray of DECK I.**
2. **Press the OPEN/CLOSE button to close the tray.**
3. **Press one of the CASSETTE NUMBER buttons to load the tape that will play first.**
4. **Advance (or reverse) the tape to the beginning of the track you want to copy first.**

- Tape copying must begin from side A. Therefore, make sure that the tape is rewound to the beginning of side A, and the forward play indicator (▷) is lit.

5. **Load the cassette for recording in DECK II.**

- Make sure that the erasure prevention tabs are intact.
- Advance the tape to the end of the leader section.
- Tape copying must begin from side A. Therefore, make sure that the tape is rewound to the beginning of side A, and the forward play indicator (▷) is lit.

6. **Select the desired tape transport mode with the REVERSE MODE button.**

- To record on only one side of the tape, select "⇒" (one way mode).
- To record on both sides of the tape, select "⇔" (reverse mode).

7. **Press the EDIT button.**

- "E- _ _" appears on the multifunction display.

8. **Press the EDIT button again to select the number of tracks that will be copied.**

- Press the EDIT button repeatedly; once for each track that you wish to have copied. Only consecutive tracks can be selected in this way. The number of tracks selected will appear on the multifunction display.

EXAMPLE: "E-07"

- Up to 15 consecutive tracks can be played back. If the EDIT button is pressed 16 times, the multifunction display will revert to tape counter display mode.
- Tape copying begins about 4 seconds after the last press of the EDIT button.
- The copied tape is recorded with the same Dolby noise reduction characteristics as the playback tape, regardless of the settings of the DOLBY NR system.

After tape copying:
When the selected track(s) finish playing, the playback deck enters stop mode. The recording deck creates a 4-second blank section, then enters stop mode. To record more tracks from the same tape or a different tape, repeat steps 3, 4 and 7.

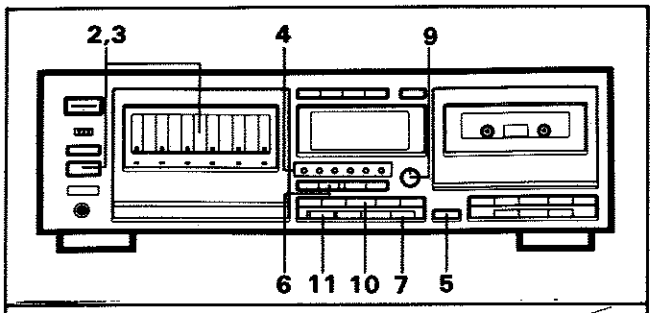
One way mode recording (⇒)
When either the recording deck or the playback deck reaches the end of the first side of the tape, both DECK I and DECK II enter stop mode, and tape copying ends.

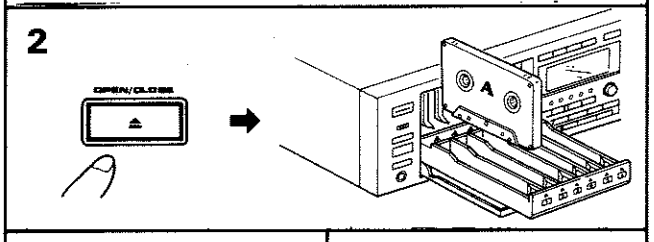
Reverse mode recording (⇔)

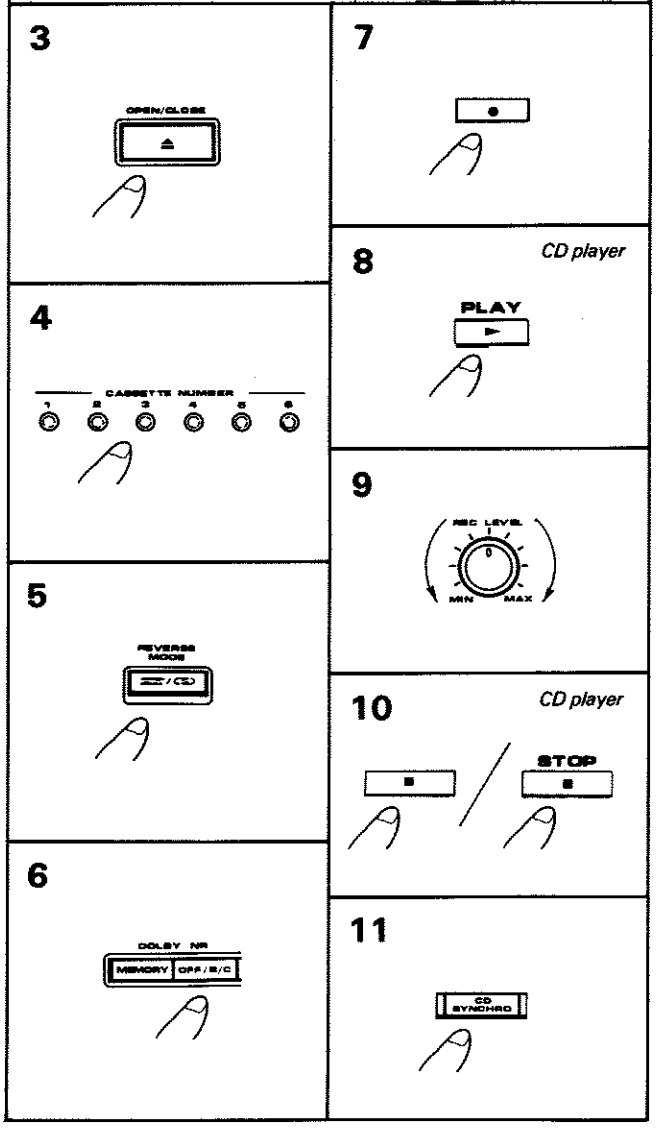
- When the playback deck reaches the end of side A, the recording deck enters stop mode. When the locates the next track, it enters stop mode. The recording deck rewinds to the end of the previous track and then enters recording mode. The playback deck will resume playback about 4 seconds later.
- When the recording deck reaches the end of side A, the playback deck returns to the beginning of the selection which is currently playing and enters play pause mode. Playback resumes about 10 seconds after the recording deck begins recording on side B.

To stop in the middle of tape copying:
Press the stop (■) button of either DECK I or DECK II. Both decks will stop.

CD·DECK SYNCHRO RECORDING (DECK I only)







This cassette deck has two synchro recording systems. One is for normal synchro recording, in which one or more compact discs are recorded onto a single cassette tape. The other is for relay synchro recording, in which one compact disc is recorded onto each tape, and the tapes are automatically changed as the CDs are changed.

- CD·Deck synchro recording can only be carried out when this unit is connected to a PIONEER CD player equipped with a CD·DECK SYNCHRO jack (see page 7).

NORMAL SYNCHRO RECORDING

Program recording

If the CD player has a program function to determine the order of playback, program the CD player before beginning this operation.

1. **Load a compact disc into the CD player.**
2. **Place the cassettes on the tray.**
- Make sure the erasure prevention tabs are intact.
3. **Press the OPEN/CLOSE button to close the tray.**
4. **Press one of the CASSETTE NUMBER buttons to load the cassette for recording.**
5. **Select the desired tape transport mode with the REVERSE MODE button.**
6. **Select the desired Dolby noise reduction systems with the DOLBY NR buttons (see page 16).**
7. **Press the recording (●) button to enter recording stand-by mode.**
8. **Press the play button of the CD player.**
9. **Adjust the recording level (see page 16).**
10. **Press the stop buttons of both the cassette deck and the CD player.**
- Unless both this cassette deck and the CD player are in stop mode, synchro recording cannot be performed.
11. **Press the CD SYNCHRO button.**
- The cassette deck begins recording and the CD player starts playing about 10 seconds later.

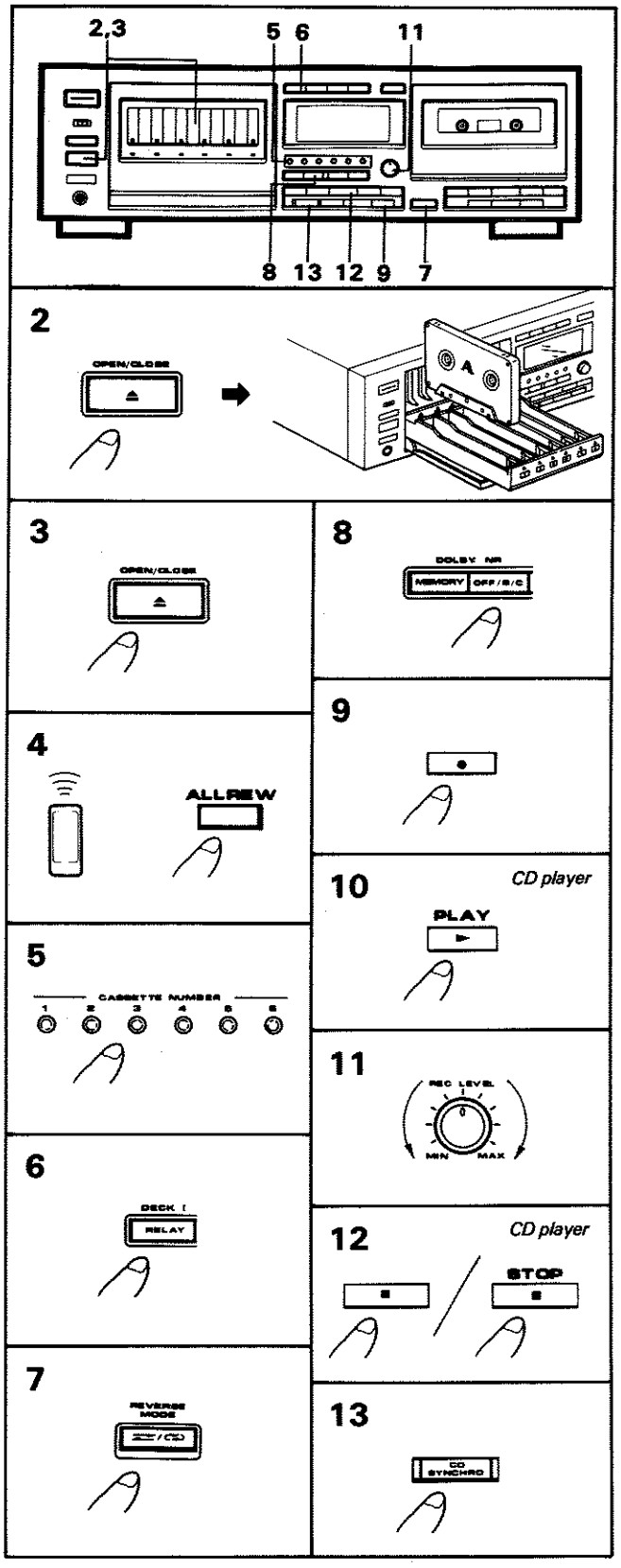
When the compact disc finishes playing:
The CD player enters stop mode and the cassette deck enters recording standby mode. Change the disc and press the play button of the CD player to resume recording. If the CD player does not resume play within 1 minute, the cassette deck enters stop mode.

When the CD player changes discs (twin-tray or multi-play CD players):
The cassette deck enters recording standby mode, and resumes recording when the CD player begins playing the next disc. A 4-second blank space is automatically created between tracks.

If the tape ends while the CD is still playing:
The CD player returns to the beginning of the current selection and enters pause mode. To resume recording, load another tape and check the tape running indicator to make sure that the tape is moving in the desired direction. If not, press the playback (▶ or ◀) button to change the tape direction, then immediately press the stop (■) button. When the proper direction is selected, press the CD SYNCHRO button again. If the CD SYNCHRO button is not pressed within one minute, the CD player enters stop mode.

If the auto-reverse function operates while the CD player is still playing:
The CD player returns to the beginning of the current selection and enters pause mode. A 10-second blank space is automatically created on the reverse side, then the CD player resumes playback and the cassette deck resumes recording.

CD·DECK SYNCHRO RECORDING (DECK I only)



RELAY SYNCHRO RECORDING

NOTE:
During Relay Synchro Recording, it is only possible to program the playback order of one disc at a time.

1. **Load a compact disc into the CD player.**
2. **Place the cassettes on the tray.**
- Make sure the erasure prevention tabs are intact.
3. **Press the OPEN/CLOSE button to close the tray.**
4. **Press the ALL REW button to rewind all cassette tapes to the beginning of side A.**
5. **Press one of the CASSETTE NUMBER buttons to load the cassette for recording.**
6. **Press the RELAY button to select relay mode.**
7. **Select the desired tape transport mode with the REVERSE MODE button.**
8. **Select the desired type of Dolby noise reduction for each cassette with the DOLBY NR buttons (see page 16).**
9. **Press the recording (●) button to enter recording standby mode.**
10. **Press the play button of the CD player.**
11. **Adjust the recording level (see page 16).**
12. **Press the stop buttons of both the cassette deck and the CD player.**
- Unless both this cassette deck and the CD player are in stop mode, synchro recording cannot be performed.
13. **Press the CD SYNCHRO button.**
- The cassette deck begins recording and the CD player starts playing about 10 seconds later.

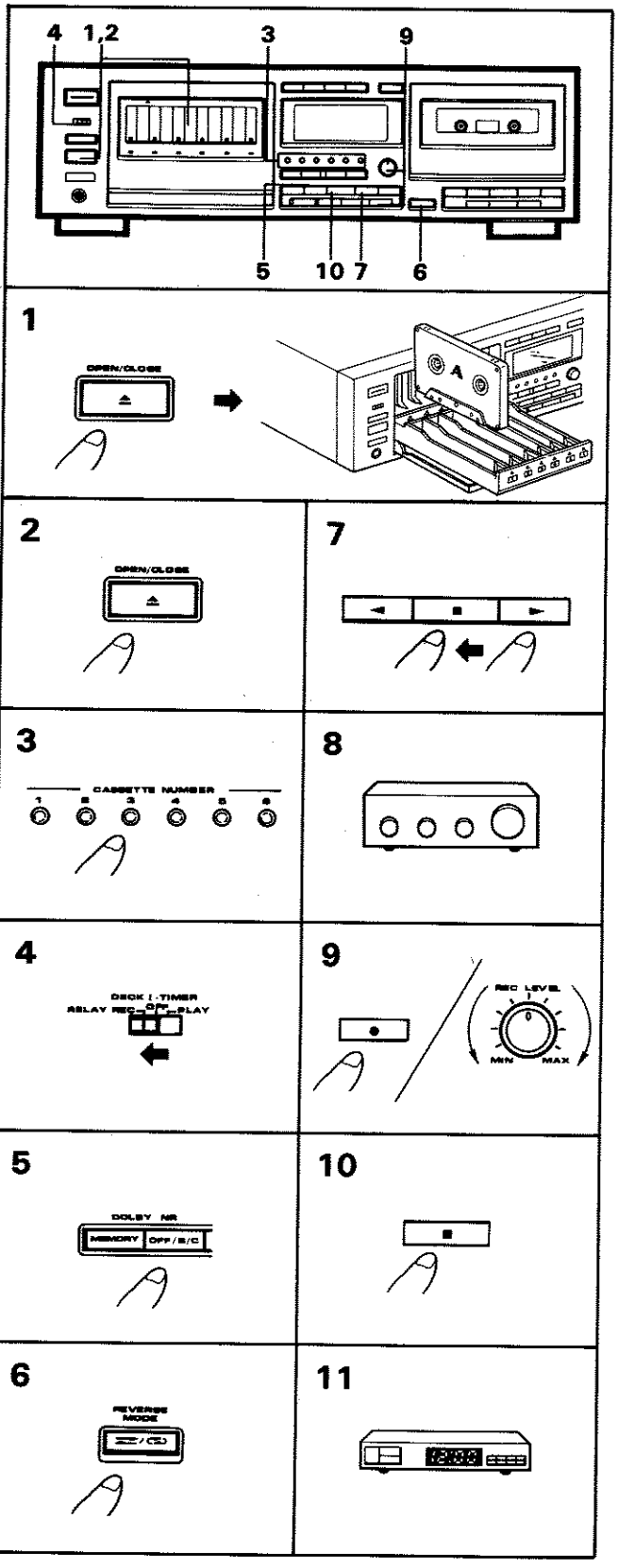
When the compact disc finishes playing:
The CD player enters stop mode and the cassette deck loads the next cassette, then enters recording standby mode. Change the disc and press the play button of the CD player to resume recording. If the CD player does not resume play within one minute, the cassette deck enters stop mode.

When the CD player changes discs (twin-tray or multi-play CD players):
The cassette deck loads the next cassette tape and then enters recording standby mode. The CD player will change the disc, and the cassette deck resumes recording when the CD player begins playing the next disc. The cassette deck begins recording, and the CD player begins playback about 10 seconds later.

If the tape ends while the CD is still playing:
The CD player plays the rest of the compact disc. The cassette deck waits until the CD finishes playing, then loads the next tape and enters recording standby mode.

NOTE:
- *If the erasure prevention tabs have been removed from any of the loaded cassettes, the cassette deck will stop when it encounters the removed tab (i.e., when it attempts to begin recording on the protected side). Relay synchro recording is terminated.*

RECORDING USING AN AUDIO TIMER (DECK I only)



When this cassette deck is connected to an audio timer, two timer modes can be selected. Timer Relay Recording or Timer Playback.

TIMER RELAY RECORDING
(Unattended recording from tuner, etc.)
At the selected time, relay recording of all tapes on the tray begins, starting with the tape in the lowest numbered slot.

1. **Place the cassettes on the tray.**
Make sure that the erasure prevention tabs are intact.
2. **Press the OPEN/CLOSE button to close the tray.**
3. **Press one of the CASSETTE NUMBER buttons to load the cassette for recording.**
For relay recording, press the CASSETTE NUMBER button to load the tape you want to record first.
4. **Set the DECK I TIMER switch to the RELAY REC position.**
5. **Select the desired type of Dolby noise reduction for each cassette with the DOLBY NR buttons (see page 16).**
6. **Select the desired transport mode using the REVERSE MODE button.**
7. **One way mode recording (⇒)**
To record on side A, press the forward play (▶) button and immediately press the stop (■) button. To record on side B, press the reverse play (◀) button and immediately press the stop (■) button. If the reverse play (◀) button is pressed, side B of the first tape will be recorded. However, all other tapes will automatically be recorded on side A.

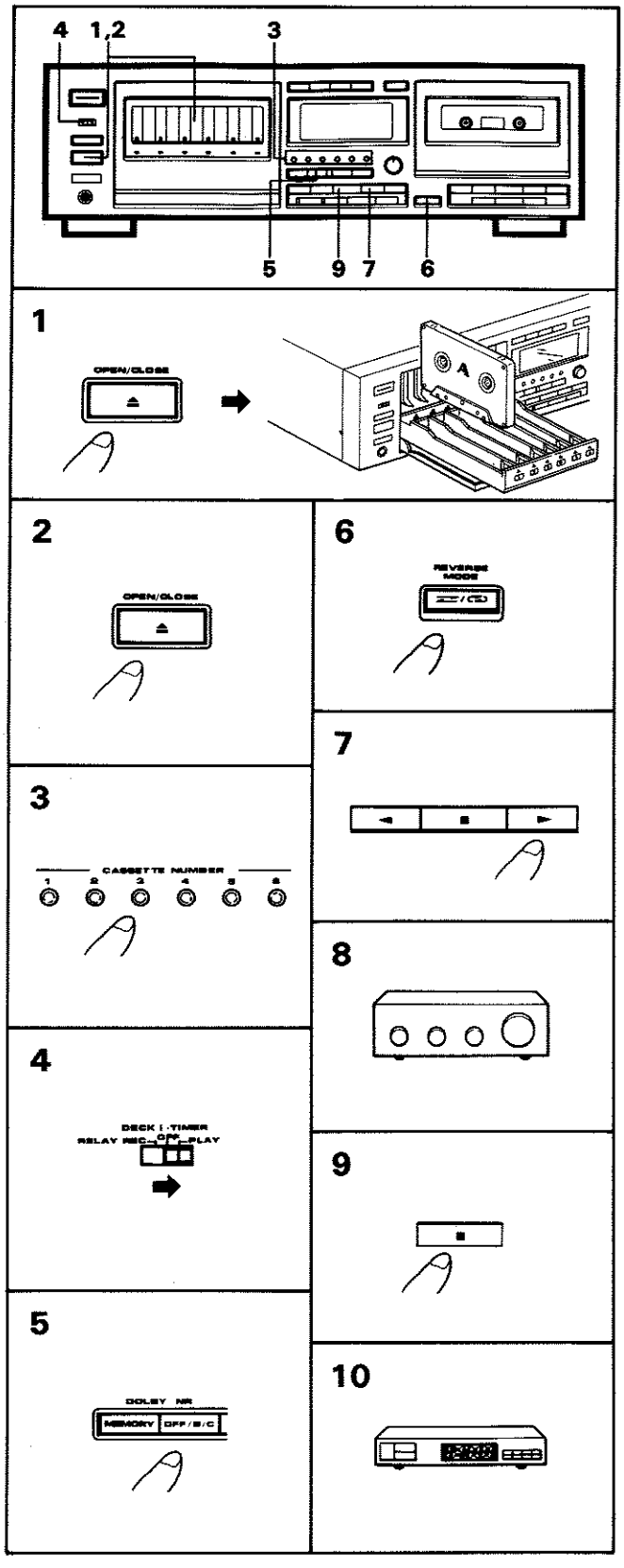
Reverse mode recording (⇔)
Press the forward play (▶) button, then immediately press the stop (■) button. If the reverse play (◀) button is pressed, recording will stop after only one side is recorded. Check the tape transport indicators to ensure that the desired direction is selected.

8. **Select the desired audio source with your amplifier and tuner.**
9. **Press the recording (●) button to enter recording standby mode, and adjust the recording level (see page 16).**
10. **Press the stop (■) button.**
11. **Set the audio timer.**
When the timer is set, it will turn off the power of all connected components. At the time set on the audio timer, the power will be turned on, and recording will begin automatically.

When not using the timer function
Make sure that the DECK I TIMER switch is set to the OFF position. If the switch is left in the RELAY REC or PLAY position, recording or playback may begin unexpectedly when the power is turned on.

Audio timer connections
Refer to the operating instructions supplied with the audio timer.

PLAYBACK USING AN AUDIO TIMER (DECK I only)



TIMER PLAYBACK

The cassette deck is automatically set to the relay mode, and plays back all tapes starting with the tape in the lowest numbered slot.

1. **Place the cassettes on the tray.**

Make sure that the erasure prevention tabs are removed.

2. **Press the OPEN/CLOSE button to close the tray.**
3. **Press one of the CASSETTE NUMBER buttons to load the cassette for playback.**
4. **Set the DECK I TIMER switch to the PLAY position.**
5. **Select the same Dolby noise reduction for each cassette that was used for recording (see page 16).**
6. **Select the desired transport mode using the REVERSE MODE button.**
7. **Press the play (▶) button.**

In timer playback mode, the cassette deck can begin playback from the forward direction only.

8. **Adjust the volume and tone controls on the amplifier.**
9. **Press the stop (■) button.**
10. **Set the audio timer.**

When the timer is set, it will turn off the power of all connected components. At the time set on the audio timer, the power will be turned on and playback will begin automatically.

When not using the timer function

Make sure that the DECK I TIMER switch is set to the OFF position. If the switch is left in the RELAY REC or PLAY position, recording or playback may begin unexpectedly when the power is turned on.

Audio timer connections

Refer to the operating instructions supplied with the audio timer.

MAINTENANCE

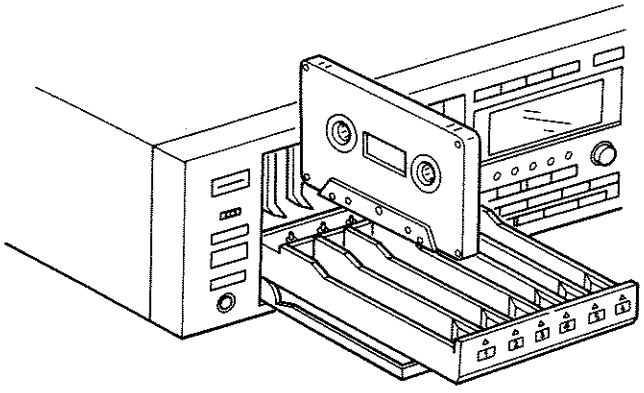
When the heads of the cassette deck get dirty, they are not able to record or play back cassette tapes clearly. The sound will be distorted or the high frequency sounds will not be reproduced. Therefore, the heads should be cleaned whenever necessary.

CLEANING THE HEADS, PINCH ROLLERS AND CAPSTANS

The heads, pinch rollers and capstans are likely to get dirty quite easily. If these parts; particularly the heads; get dirty, the high frequency components of recording will not be reproduced and the stereo balance will be impaired, resulting in a deterioration of the playback sound. It is therefore recommended that the head section be cleaned regularly. Use a commercially available cleaning cassette. Be sure to follow the instructions of the cleaning cassette tape carefully.

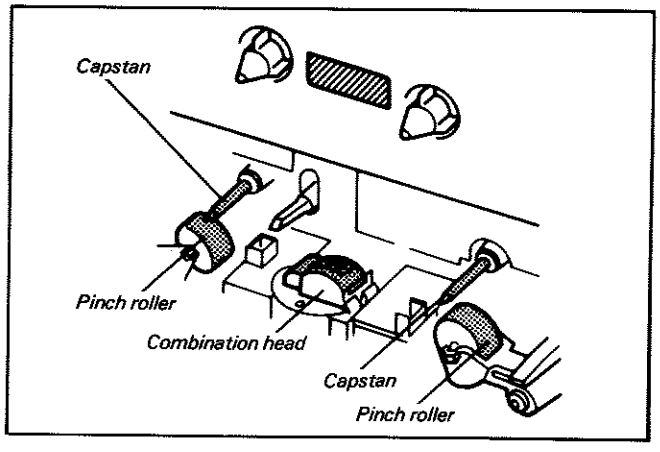
NOTES:

- *Use a commercially available "Wet type" cleaning cassette tape. (For details, refer to the instructions supplied with the cleaning cassette tape)*
- *Clean the heads regularly, after about 10 hours or so of use.*



Caution:
- Do not use dry-type cleaning cassette tapes.
- After cleaning the head, do not load a cassette tape until the cleaning fluid has dried completely (about 2 or 3 minutes).

Head cleaning for DECK II



Dip a cleaning swab in cleaning fluid and use it to wipe the heads, capstans and pinch rollers.

Caution:
- After cleaning the head, do not load a cassette tape until the cleaning fluid has dried completely (about 2 or 3 minutes).

CLEANING THE FRONT PANEL SECTION

Clean the cassette deck regularly with a soft cloth. If the front panel gets dirty of greasy, clean it with a damp cloth and mild soap, then wipe it dry with a soft cloth. Never use volatile cleaners like thinners, benzine or alcohol because they will damage the panel finish.

TROUBLESHOOTING

Incorrect operations are sometimes mistaken for malfunctions. If you think that there is something wrong with this cassette deck, check the list below to see if you can correct the problem yourself. Sometimes, the trouble may be caused by another component, or by faulty connections. If the trouble cannot be rectified even after all of the checks below have been performed, contact your nearest PIONEER authorized service center, or your dealer, to carry out repair work.

Symptom	Cause	Remedy
POWER		
The power does not go on.	• The power plug is unplugged. • The component (amplifier, audio timer, etc.) to which the cord is attached is off.	• Insert the power plug correctly. • Turn the stereo amplifier or audio timer on.
REMOTE CONTROL UNIT		
The remote control does not operate.	• Too far from cassette deck or wrong angle. • The system remote control cord is connected.	• Point the remote control unit at the remote sensor window. • Send the remote control infrared signal to the remote control receiving unit of the system.
PLAYBACK		
The tape stops immediately.	• The tape is completely wound. • The tape is slack.	• Play back in the opposite direction. • Rewind the tape. • Take up tape slack (see page 6).
The level meter does not work.	• The tape is not recorded. • The heads are dirty.	• Replace the tape with a recorded one. • Clean the heads (see page 28).
There is no sound.	• The amplifier input selector is not correctly set. • The amplifier volume level is set too low. • There are connection problems (wrong connection, cord removed, poor contact, broken wire).	• Set the amplifier input selector correctly. • Turn up the volume. • Connect securely.
RECORDING		
The recording indicator does not light.	The cassette erasure prevention tabs are removed.	• Replace the cassette with one whose tabs are intact. • Cover the hole under the tab (see page 6).
The level meter does not work.	• The recording level is set too low. • The amplifier is not delivering a recording signal (from the tuner, CD player, etc.). • Wrong connection, connection cord removed, poor contact, broken wire.	• Adjust the recording level. • Set the amplifier recording output selector correctly. • Check connections.
The tape stops immediately.	• The tape is completely wound. • The tape is slack.	• Record in the opposite direction. • Rewind the tape. • Take up tape slack (see page 6).
The tape cannot be recorded.	The heads are dirty.	Clean the heads (see page 28).
CD-Deck synchro recording cannot be carried out.	CD-Deck synchro control cord and Input/Output cords are not connected.	Connect correctly (see page 7).

TROUBLESHOOTING

Symptom	Cause	Remedy
POOR SOUND QUALITY		
Sound is unstable or interrupted.	• The heads, pinch rollers and capstans are dirty. • The tape is not uniformly wound.	• Clean the heads, etc. (see page 28). • Fast-forward or fast-reverse the tape completely.
There are no high frequencies.	• A tape recorded without Dolby NR is being played back with Dolby B or C-type noise reduction. • The heads are dirty.	• Press the DOLBY NR buton to select OFF. • Clean the heads (see page 28).
High frequencies are emphasized.	A Dolby NR-encoded tape is being played back without the Dolby NR.	Use the same type of the Dolby noise reduction that was used for recording.
The sound from previous recordings remains when the tape is re-recorded.	The heads are dirty.	Clean the heads (see page 28).
The sound is distorted.	• Recording level is too high. • The recorded signal itself is distorted. • The heads are dirty.	• Turn the recording level down. • Replace the cassette tape. • Clean the heads (see page 28).
There is too much noise.	• A noisy tape is being used. • There is a faulty connection. • Recording level is too low. • The heads are dirty.	• Replace the cassette tape. • Check all connections. • Turn the recording level up. • Clean the heads (see page 28).
OTHER		
Music search function does not operate.	Blanks between selections are less than 4 seconds long.	Use a tape with blanks more than 4 seconds long.
Recording or playback starts suddenly when the power is turned on.	The DECK I TIMER switch is not set to OFF.	Set the DECK I TIMER switch to OFF.
Cannot use the remote control system.	The control cord is not connected.	Connect the control cord (see page 7).
The Err indicator appears.	Faulty operation.	Turn power off then on again.

SPECIFICATIONS

System ..... 4-track, 2-channel stereo
Heads ..... "Hard Permalloy" recording/playback head ×2
"Ferrite" erasing head ×2
Motors ..... DC servo motor (capstan) ×2
DC motor (reel, open/close, loading) ×4
Wow and flutter ..... No more than 0.055% (WRMS)
No more than ±0.16% (DIN)
Fast winding time ..... Approximately 90 seconds
(C-60 tape)
Frequency response
—20 dB recording:
Normal tape ..... 20 to 17,000 Hz, ±6 dB
Chrome tape ..... 20 to 18,000 Hz, ±6 dB
Metal tape ..... 20 to 19,000 Hz, ±6 dB
Signal-to-Noise ratio
Dolby NR OFF ..... More than 57 dB
Noise reduction effect
Dolby NR B type ON ..... More than 10 dB (at 5 kHz)
Dolby NR C type ON ..... More than 19 dB (at 5 kHz)

Harmonic distortion ..... No more than 1.0% (0 dB)
Input (Sensitivity)
LINE (INPUT) ..... 63 mV (Input impedance 50 kΩ)
Output (Reference level)
LINE (OUTPUT) ..... 316 mV (Output impedance 5.8 kΩ)
Phones ..... 0.25 mW (Load impedance 8 Ω)

Miscellaneous
Power requirements
U.S., Canadian model ..... AC 120 Volts, 60 Hz
U.S. military and other destination models ..... AC 110 V/
120 V—127 V/220 V/240 V (switchable), 50/60 Hz
Power consumption
U.S., Canadian model 36W
U.S. military and other destination models 38W
Dimensions ..... 420 (W) ×136 (H) × 364 (D) mm
16-9/16(W) ×5-3/8(H) ×14-5/16(D) in
Weight (without package) ..... 8.3 kg (18 lb 5 oz)

Accessories
Operating instructions 1
Connection cord with pin plugs 2
CD-Deck synchro control cord 1
System remote control cord 1
Remote control unit 1
Dry cell batteries "AAA" [IEC R03 (UM-4)] 2

Subfunctions
- DOLBY NR B/C types
- DOLBY HX PRO (DECK I only)
- DOLBY NR memory
- High-speed and normal-speed tape copying (DECK II → DECK I)
- Edit copying (DECK I → DECK II)
- Relay edit copying (DECK I → DECK II)
- Synchronized copy start
- Blank skip
- Music search over ±15 selections
- CD · Deck synchro recoring capability (DECK I only)
- Tape counter/Time counter
- Tape Remaining Time indicators (6 seg; DECK I only)
- FL peak level meter (7 seg + ∞)
- Automatic space recording mute
- One-touch recording pause
- Automatic tape selector
- Automatic reverse
- Phones jack
- TIMER RELAY Recording/TIMER Playback (DECK I only)
- System remote control compatible
- Relay recording/Relay playback (DECK I only)
- All rewind (DECK I only)
- Cassette random playback (DECK I only)
- Cassette scan playback (DECK I only)

NOTE:
Specifications and design subject to possible modifications without notice due to improvements.

<RRB1076 >

Published by Pioneer Electronic Corporation.
Copyright © 1991 Pioneer Electronic Corporation.
All rights reserved.

PIONEER ELECTRONIC CORPORATION 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153, Japan
PIONEER ELECTRONICS [USA] INC. 2265 East 220th Street, Long Beach, California 90810, U.S.A.
P.O. BOX 1720, Long Beach, California 90801, U.S.A.
PIONEER ELECTRONICS OF CANADA, INC. 505 Cochrane Drive, Markham, Ontario L3R 8E3, Canada
PIONEER ELECTRONIC [EUROPE] N.V. Keetberglaan 1, 2740 Beveren, Belgium, TEL: 03/750.05.11
PIONEER ELECTRONICS AUSTRALIA PTY. LTD. 178-184 Boundary Road, Braeside, Victoria 3195, Australia, TEL: [03] 580-9911

<91F03BY0D04>

Printed in Japan <RRB1076-B>